Dermatology

Handwritten Note

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Name: _____

Subject: **Dermatology**

Dermatology

- Dr Saurabh Jindal

3 Parts of Skin

1) Epidermis → ← DEJ (Dermo-epidermal Jn)

2) Derma →  ← Lobules, septa

3) Fat (panniculus)

EPIDERMIS

4 Layers

1) STRATUM CORNEUM

Thickest Layer

Max. Keratin

Corneum → means Keratin.

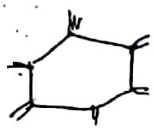
2) STRATUM GRANULOSUM

↳ granule

↓

Keratohyaline granule 

Thinnest Layer

3) STRATUM SPINOSUM (SS)  ← Desmosome

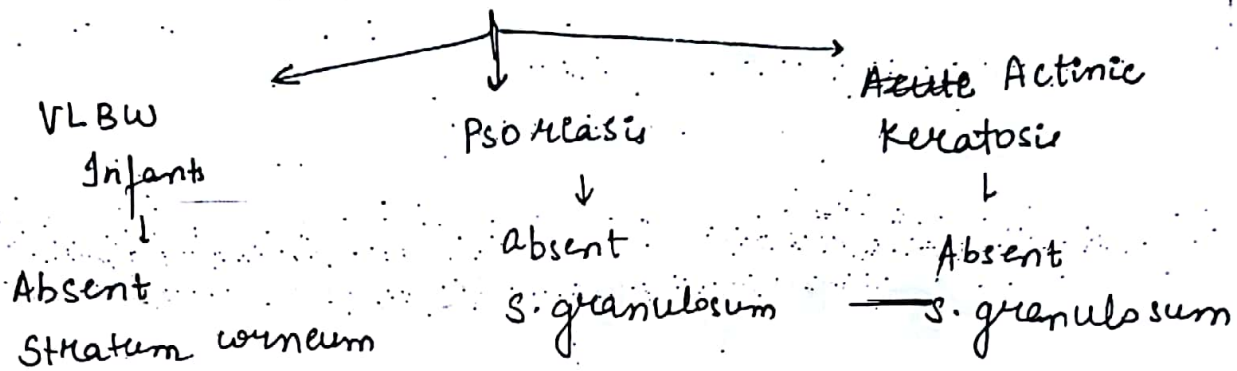
Spinous projection coming out

Max. Desmosome are present in SS AIIMS

4) BASAL LAYER

For Division

SITUATIONS For 3 LAYERS



5 LAYERS → palm + sole

- S corneum
- S. Lucidum ⇒ non nucleated layer
  - ? compression
  - ? artefact
- S. granulosum
- S. spinosum
- S. Basal

pressure (trauma)

Keratinisation of epidermal cells

- SC → 1000 mg
- SG → 100 mg
- SS → 10 mg Keratin
- S. Basal → 1 mg Keratin

lots of pressure

SC - 1000 mg Keratin (thick SC)

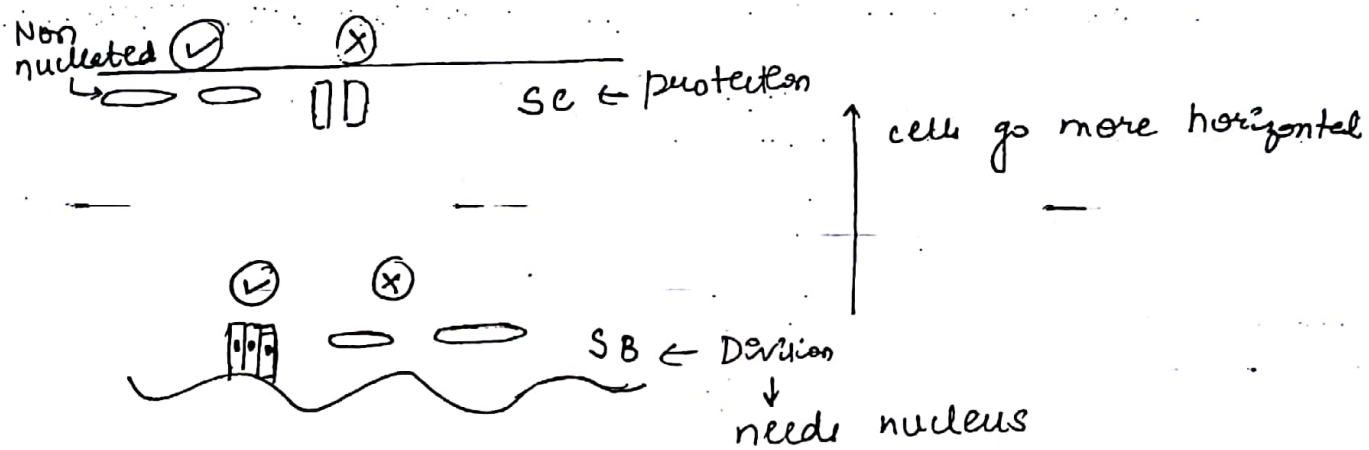
↓

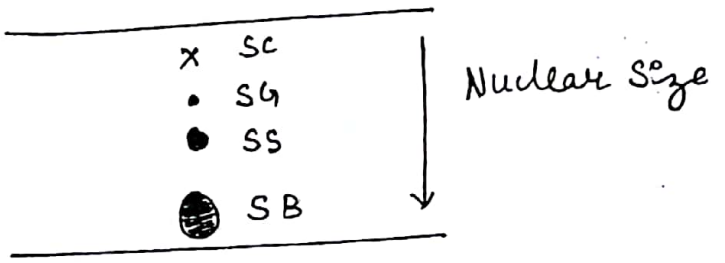
Hyperkeratosis

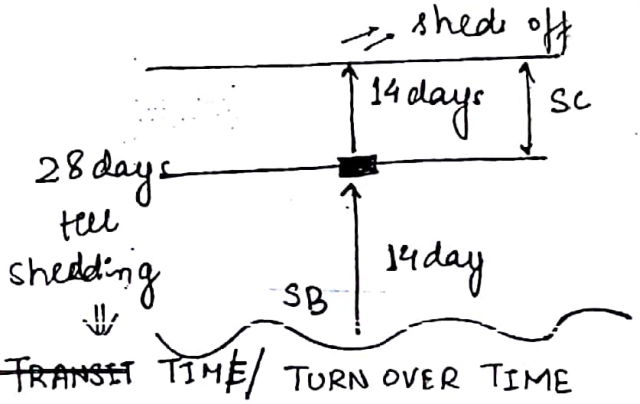
Thick SG ⇒ Hypergranulosis
↓
Seen in LICHEN PLANUS.

Thick SS ⇒ Acanthosis
↓
Seen in LICHEN PLANUS
PSORIASIS
ECZEMA

SS + SB = Malphigian Layer

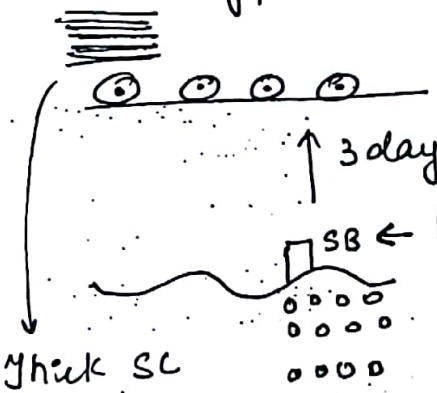






Psoriasis

Hyperdivision of SB Layer.



Nucleated SC -- Less time to shed off

↓

PARAKERATOSIS

3 days

SB ← Reduce Div. of SB Layer = DNA Inhibitor
↳ Methotrexate

T cell stimulates SB cell to divide.

Thick SC

↓

HYPERKERATOSIS

↓

Keratolytic Drug

Retinoid

/ ↓

vit A like

Remove T cells

1) Methotrexate
2) Cyclosporine
3) Biological drugs

EPIDERMAL CELLS

1) 95% ⇒ has keratin, cell are called

KERATINOCYTES

- Func":- 1) Protection
  2) Immunological Role → secretion of cytokines → Innate Immunity
- Derived from ectoderm.

2> Rest 5%

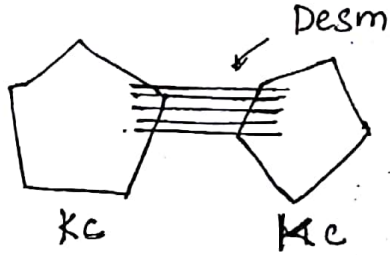
MELANOCYTES (MC) → Make melanin → UV light protection → derived from Neural crest

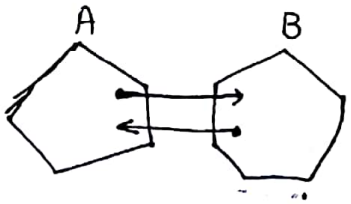
LANGERHANS CELL (LC) → Ag presenting cells → from Bone marrow

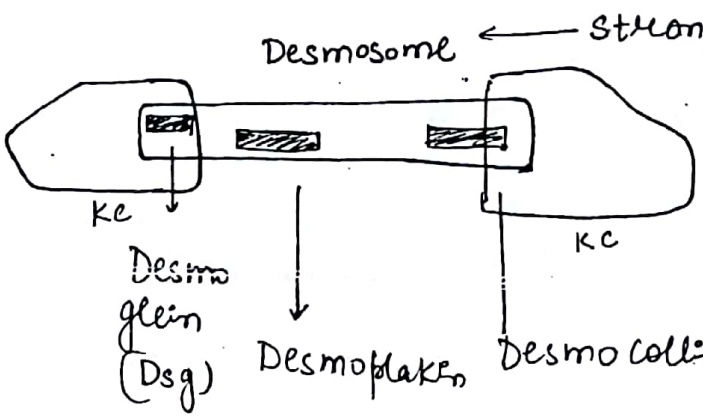
MERKEL DISC → touch Receptors → either from ectoderm or Neural crest

Keratinocyte : Merkel's cell have Desmosome on their surface.

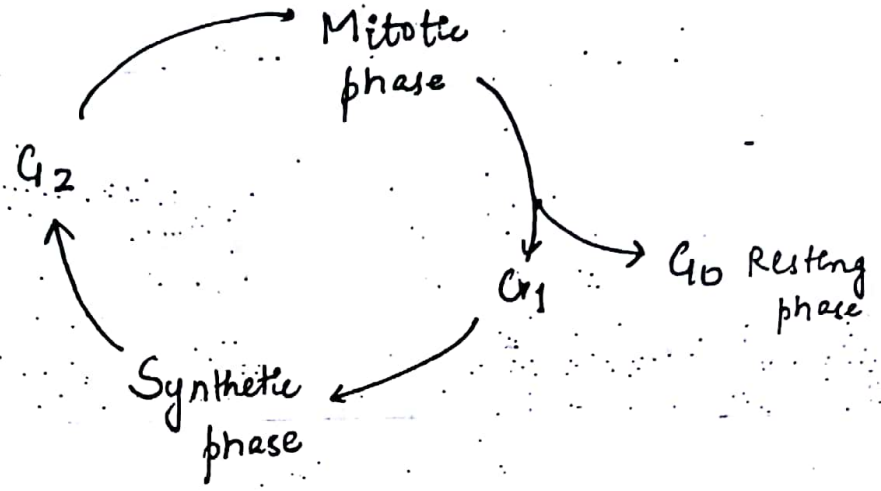
Melanocyte : Langerhans cell do not have Desmosome







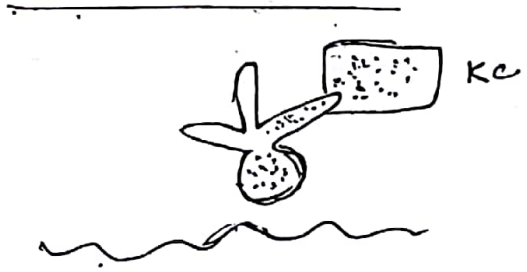
Keratinocyte cell cycle Time = 311 hrs



In Psoriasis ⇒ cell cycle time is ↓ to 36 hours.

MELANOCYTES

Melanocytes are Dendritic cells
They make melanin & transports it via dendritic processes into KC [~~Desmo~~ Epidermal melanin unit = 1:36]



Indians have Type 5 skin (Brown skin)
Less melanin (fair skin) or No melanin (albinism)

↓

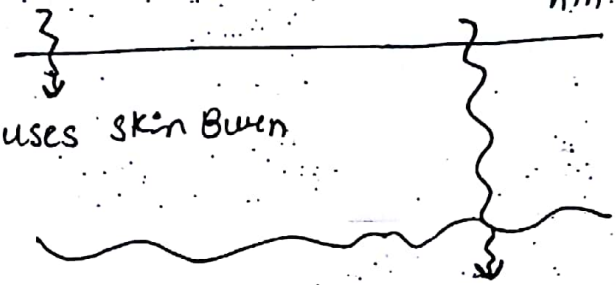
Chronic DNA damage

↓

Premalignant → Malignancy (SCC, Bcc, Melanoma)

Photo carcinogenesis
↓
Ch. sun damage
[cumulative or light]

UVB - 290-320 nm UVA - 320-400 nm



Faiver skin
↳ More Burning

Darker skin
↳ More Tanning

PREMALIGNANT SKIN DISEASES

(A) SUN EXPOSURE

eg. ACTINIC KERATOSIS
↓
means sun
↓
Lead to SCC

(B) May or May not be SUN Induced

1) Bowen's Disease -
SCC - In - Situ
↓
Restricted to epidermis

2) ~~Oral leukoplakia~~

3) Oral erythroplakia

4) Oral submucous fibrosis
5) Oral ulcerative lichen planus

MALIGNANT SKIN DISEASES

1) **BCC**

H/C Skin Cancer

H/C type of BCC ⇒ NODULO-ULCERATIVE (Rodent Ulcer)

Locally aggressive skin cancer
Metastasis is rare

C/F:-

1) Nodules ± ulcerate on sun-exposed sites
2) Ulcers have
   - Beaded
   - Rolled
   - Pearly

   } edge
3) Telangectasia on its surface

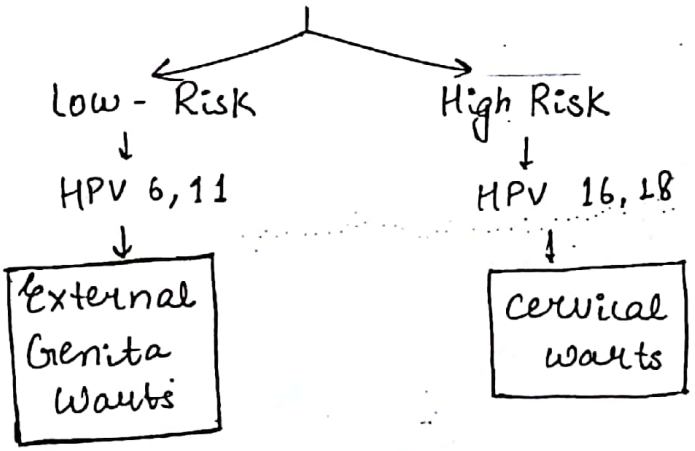
Rx:- Moh's microsurgery
↓
pathology controlled dissec^{n}.

(II) SCC

H/c in organ transplant pts.
↓
due to immunosuppression.

ETIOLOGY

1) Sun
2) Immunocompromised
3) HPV - DNA virus
   ↳ onchogenic virus
   Integrates its DNA into KC gene & divides along ē it.



C/F

a) Cauliflower masses

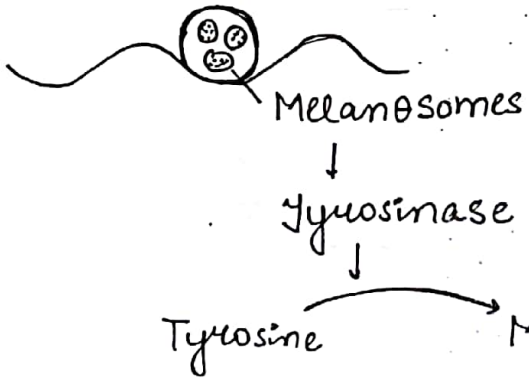
b) Hyperkeratotic plaques
c) ulcers
d) metastasis

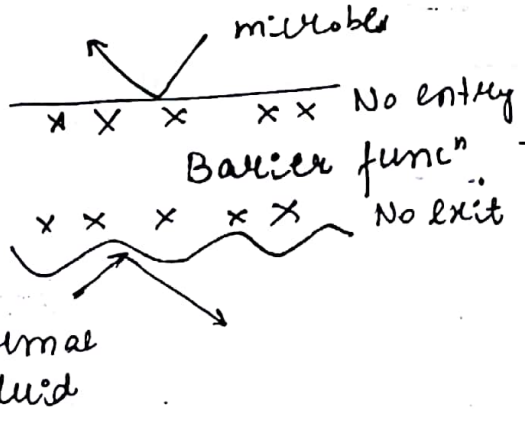
(III) Melanoma – Later.

* COLOUR OF SKIN depends on :-

1) Melanin production
2) Transfer of melanin to KC
3) No. of melanosomes

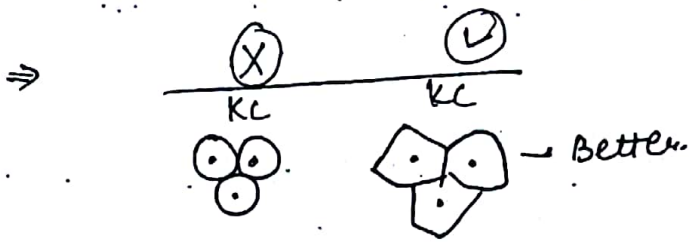
Not the no. of melanocytes

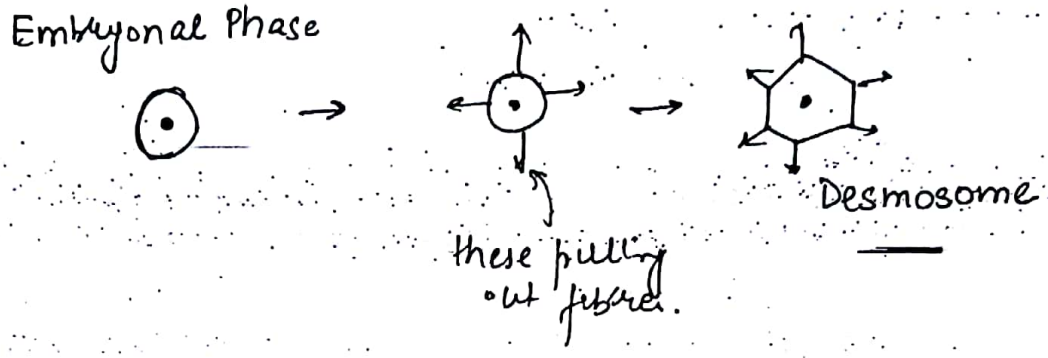




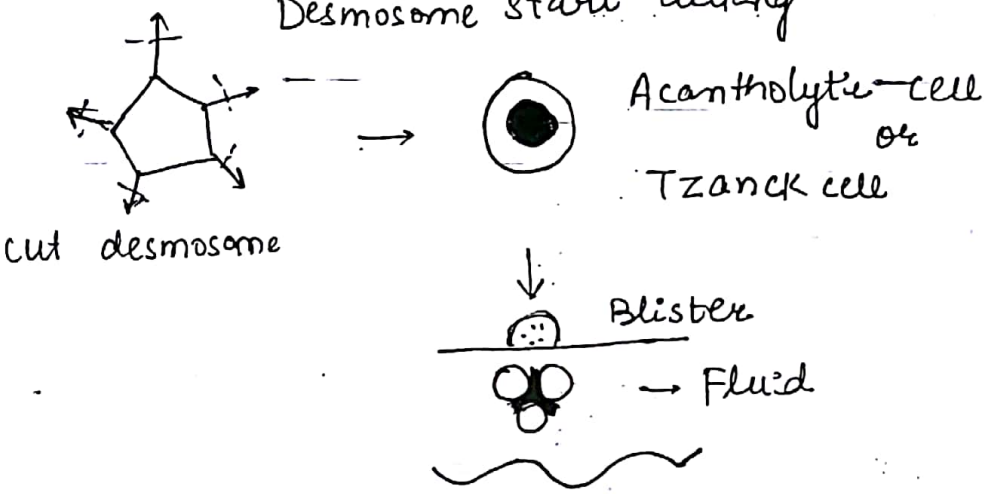
→ Gets altered where epidermis is damaged

a) Burn
b) wound.



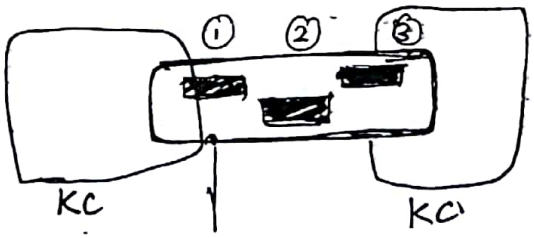


PEMPHIGUS



"pemphis" means Blister ⇒ Intercellular Disease

Y Desmosomes BREAK ?



IgG Ab formed against Desmoglein.

↓

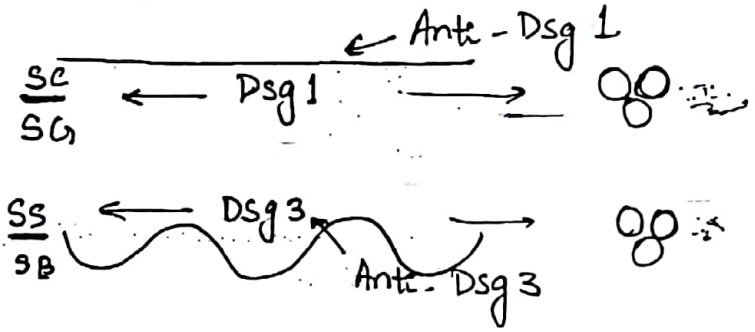
Weak Desmosome

TARGET → Desmoglein
Ab → Ante-Desmoglein (IgG)] IgG PEMPHIGUS

TARGET → Desmocollin
Ab → Ante-Desmocollin (IgA)] IgA PEMPHIGUS

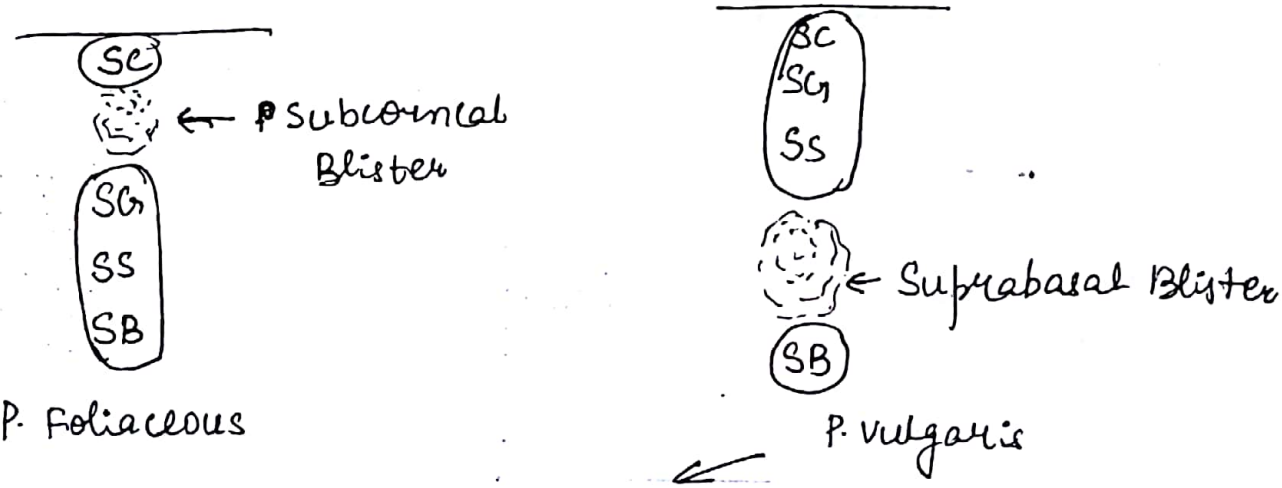
TARGET → Desmoplakin
Ab → Ante-Desmoplakin (IgA/IgG/IgM)] Paraneoplastic Pemphigus

IgG PEMPHIGUS



Subcorneal Blister = P. foliaceous

Suprabasal Blister = P. Vulgaris - common

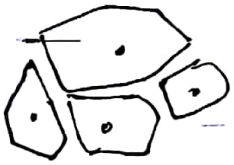


INTERCELLULAR CEMENT

← Intercellular cement (Lipids)
like a glue

make the glue
Lamellar Body (Max. in granular Layer)
Odland Body

ECZEMA/DERMATITIS



Defective cement

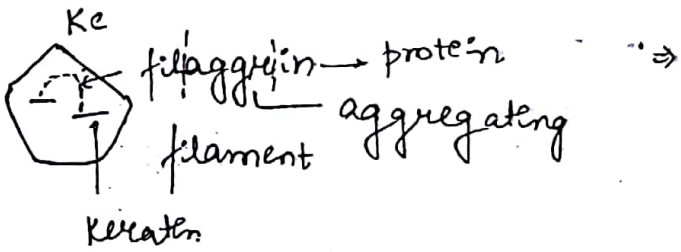
Intercellular edema (spongiosis)

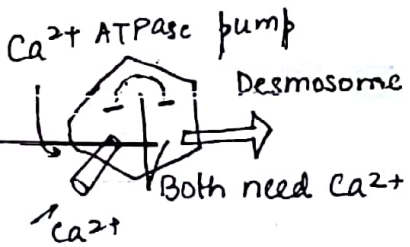
Desmosomes are (N)

Oedema or H_2O is more in Pemphigus

Oozing is a sign of acute eczema

CONGENITAL EPIDERMAL BLISTERS





DARIER's DISEASE (DD) & HAILEY-HAILEY DISEASE (HHD)

↓

mutation in Ca-ATPase pump ∴ birth

↓

weak KC

circular KC (Acantholytic cell)

DD

Keratosis Follicularis

↓ correct → there is hyperkeratosis → circular weak KC

↓ Incorrect word → No follicular involvement → Compensatory ↑ of keratin synthesis → circular strong KC

C/F :-

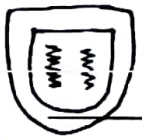
Hyperkeratotic spiny sharp papules on skin

↓

More in seborrhoeic areas

NAILS :- 1) V shaped nicking of nails

2) ~~Red/white~~ longitudinal nail lines



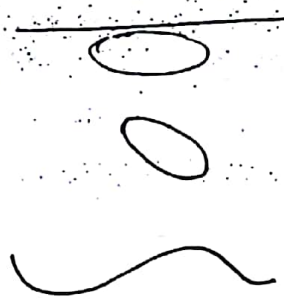
PALM- Palmar Pit

R_x = Retinoids.

DARIER'S DISEASE

Dyskeratotic cells in
SC = CORPS GRAIN

Dyskeratotic cells in
SG, CORPS ROND



SC → 100000
SG → 10000
SS → 1000
SB → 1mg

Hyperkeratosis

Premature Keratenisaton = Dyskeratosis

OTHER CAUSES FOR DYSKERATOSIS

1) Premalignant skin Disease
2) Malignant Skin Disease

HHD :- No compensatory hyperkeratose
Hence presents ∴ Blisters

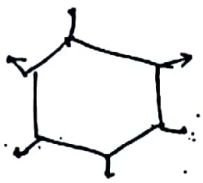
- GENE MUTATION :-

HHD
Ca ATPase 2C1 gene

Daviers
Ca ATPase 2A2 gene

EPIDERMOLYSIS BULLOSA SIMPLEX.

Trauma induced Blisters



No Keratin 5,14 since Birth.

Ⓝ Desmosome

Fragile basal Keratenocytes.

↓ TRAUMA

No acantholysis

Blister in basal layer

3 TYPES OF EPIDERMOLYSIS BULLOSA

EB SIMPLEX	EB JUNCTIONAL	EB DYSTROPHICA
S. Basal.	On DEJ"	in Dermis.

DIRECT IMMUNO FLOURESCENCE

Picks up Antibodies in Blistering Disorders

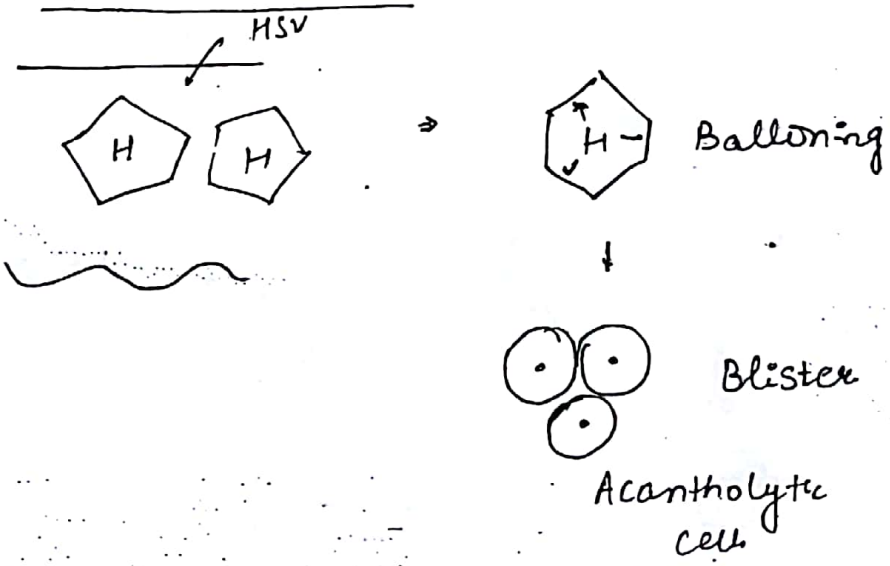
Pemphigus ⟶ DIF ⊕

DD/ HHD/ EBS | EBJ/ EBD ⟶ DIF ⊖

ACANTHOLYSIS

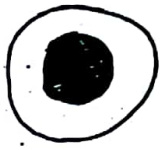
1° (Pulling Problem)	2° (Pushing Problem)
1) Pemphigus	1) HSV - Herpes Simplex
2) Darier's Disease	
3) HHD	
4) Bullous Impetigo	
5) Staphylococcal scalded skin Syndrome (SSSS)	

2° ACANTHOLYSIS

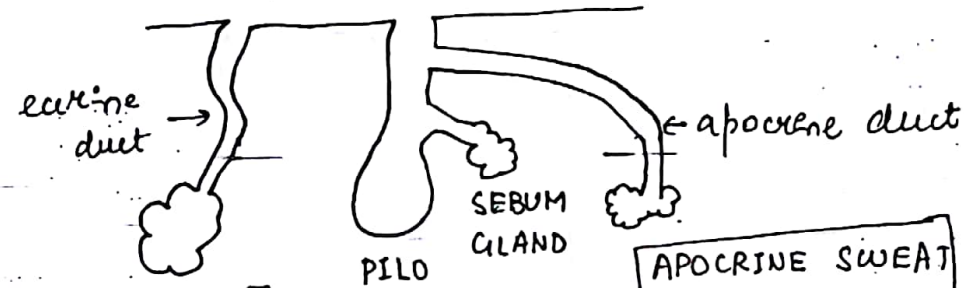


ACANTHOLYTIC CELL

1) Circular
2) Large nucleus
3) Narrow cytoplasm
4) Prominent nucleoli



APPENDAGE / ADNEXA

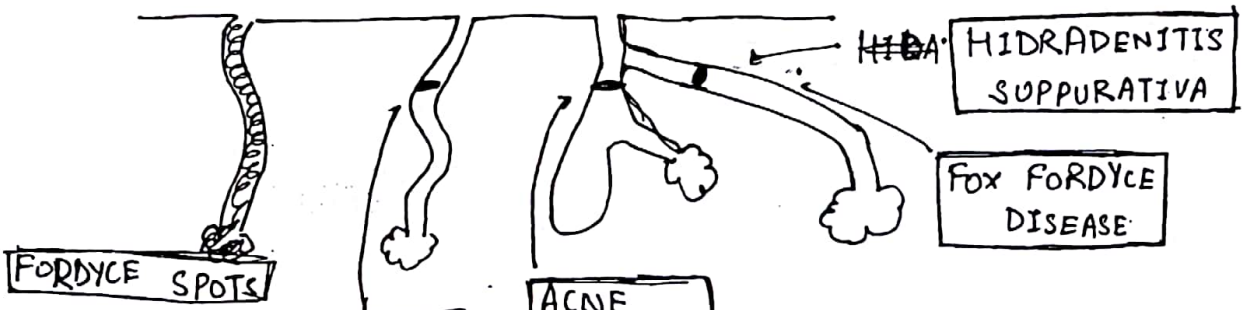


→ Everywhere else

Supplied by Cholinergic Nerves

→ Axilla
→ Perineum
→ Areola

Supplied by Adrenergic Nerves



Ectopic sebaceous glands

(occlusion due to S. epidermidis)

① ACNE VULGARIS

PATHOGENESIS:-

1) Keratenisation of follicular epithelium
2) Proliferation of propionibacterium acnes
3) ↑ Sebum produc" in seborrhoeic area
4) Dermal inflammation.

Pathogenesis of comedone :-

Comedone

(Hyperkeratenisation of follicular epithelium)

STAGE - 1 ACNE

2 TYPES

BLACK COMEDONE
(open comedone)
Black Head

WHITE COMEDONE
(closed)
White head

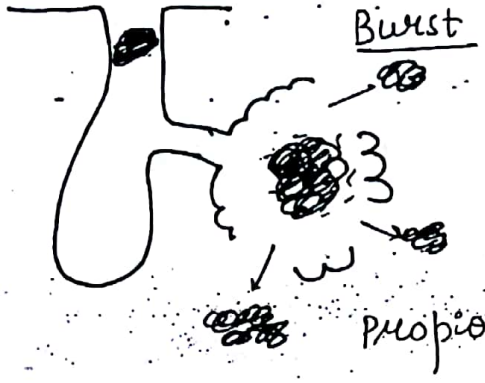
℞ = Topical Retinoids (Adapalene/ Tretinoin)

S/E → skin irritation
→ ~~photosensitivity~~
↳ hence applied at night

STAGE-2 = Inflammation

↓

[Red
Elevation] (Papule)
Pain



Stage 2 = (Stage 1 + papule)

R_x = Topical Retinoids + Topical Antibiotics
- clindamycin ✓
- clarithromycin ✓
- Dapsone. ✓

STAGE-3

Stage 2 + Pustule.

R_x = Topical retinoids + oral Doxy
Azithromycin
Minocycline → Most effective

More S/E
1) Hepatotoxic
2) Bluish skin pigment on long term use
   - nail
   - Acne scars

[redacted] / DRUG RESISTANT ACNE

1) Topical Benzoyl Perboxide
   - Safe in ♀.
   - release nascent [O] on skin surface
   - [Bactericidal]

2⇒ Topical Azelaic Acid

- Bactericidal
- Tyrosinase Inhibitor → reduces post acne pigmentation.

STAGE 4 (stage 3 + Nodule / cysts)

Acne has polymorphic Lesions

Rx = Oral Retinoids

- Acitretin = Keratolytic → used in psoriasis
- Isotretinoin = Keratolytic + Sebolytic (AIIMS, NOV 15)

STAGE 5 (ACNE CONGLOBATA)

STAGE 4 + Severe Inflammation →
- discharging sinuses
- Fever

Chest / back

Rx = Oral isotretinoin + anti inflammatory (steroids)

Recalcitrant Pustular Acne → Isotretinoin
↑ Not responding

ACNEIFORM ERUPTIONS :-

Drug induced Acne

Monomorphic Lesions on chest & check. (papule)

Causes :-

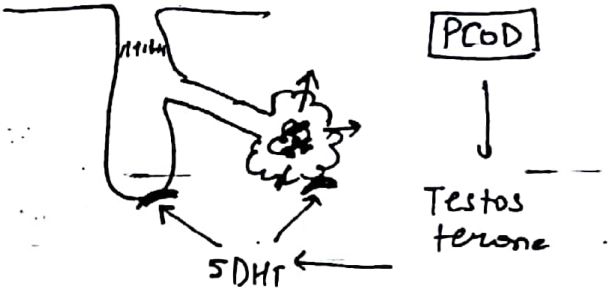
1) oral & topical steroids ✓
2) Anabolic steroids ✓
3) INH, Rifampicin ✓
4) Phenytoin, Phenobarbitone ✓

HORMONAL ACNE

eg. PCOD

presents as
- Acne
- Androgenetic Alopecia on scalp
- Hirsutism on face
- Irregular menses

R_x = Androgen (R) Blocker
- Cyproterone acetate
- Drospirinone



H/C SIDE EFFECT of Isotretinoin
= DRY LIPS (cheilitis)

Other S/E :-

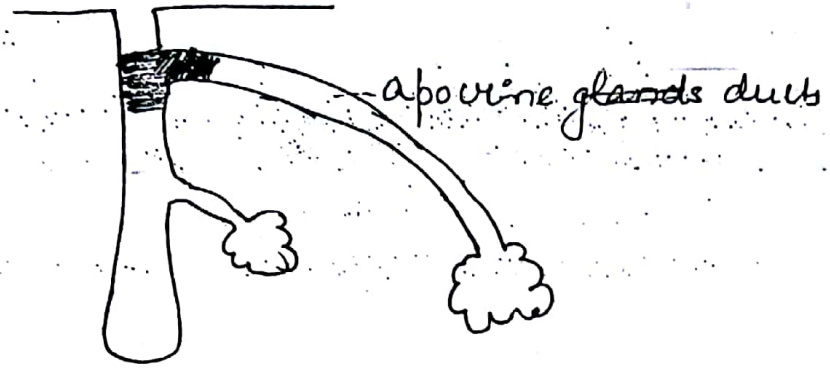
1) Hyperlipidemia
2) ♀ category 'X'
3) Period of contraception after stopping
   Isotretinoin → 1 month.
   Acitretin → 2 month.

② HIDRADENITIS SUPPURATIVA

water → sweat

gland → inflammation

pus → Discharge sinus



Keratin obstruction of apocrine ducts extending into hair follicles

↓

Lesions similar to Acne but in APOCRINE Areas.

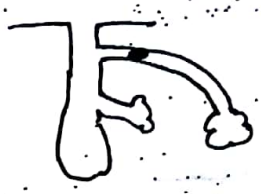
hence called INVERSE ACNE

2° Infection ⊂ S.Aureus ⇒ ✓ Creates Abscesses +
✓ Draining sinuses in apocrine areas.

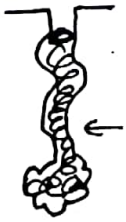
R_x = Retinoids + Broad spectrum oral Antibiotics,
Surgical debridement of pus.

(III) FOX FORDYCE DISEASE

- Lesser keratin obstruc° as compared to hidradenitis
- Only Inflammatory papules in apocrine areas
- No comedons seen.



(IV) FORDYCE SPOTS



← ectopic ~~fordy~~ sweat gland

Ectopic sebaceous gland on upper lip or Buccal mucosa
asymptomatic
No Rx required

LANGERHANS CELL

Derived from Bone Marrow
Picks up Ag in epidermis
↓
Sends to Local L.N. for processing

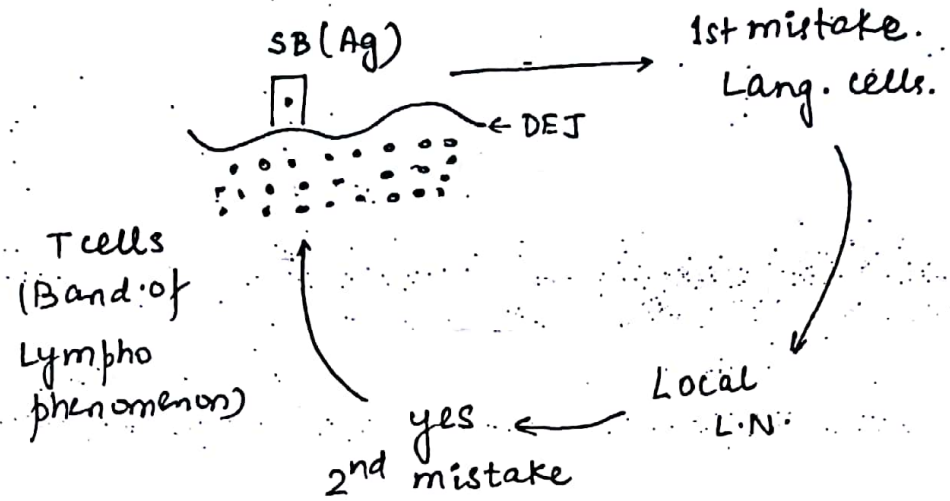
TH_1 response → (T cell)

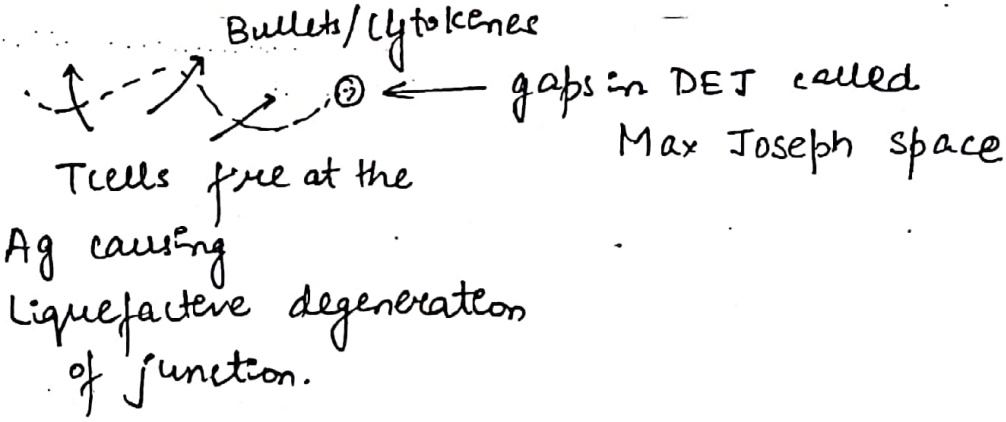
TH_2 response → (B cell)

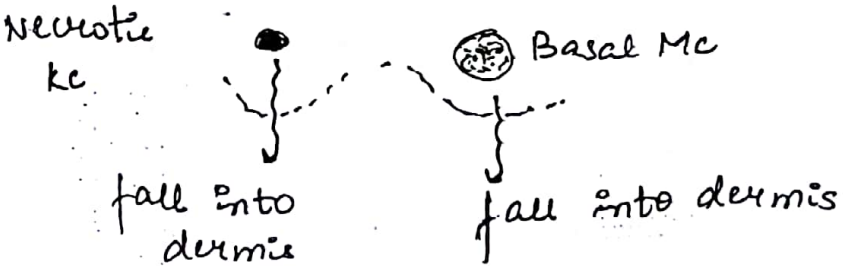
HPV puts Langerhans cell to sleep & create infec° in ~~epidermis~~.

Hence Rx for warts is Langerhans cell stimulation [Topical Imiquimod]

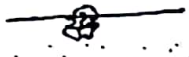
LICHEN PLANUS







Civatte bodies
or
Colloid bodies
or
cytoid bodies)

Melanin colour	Clinical skin colour
	BLACK
	BROWN
	PURPLE
	BLUE / GREY

Other changes seen in LP:-

→ Hyperkeratosis
→ Hypergranulosis
→ Pigment incontenance
→ Acanthosis (thickened spinous layer)

Band of Lymphocyte + Basal cell degeneration
= Interface Dermatitis

↙ Basal cell degeneration. (Most distinctive histology feature)

OTHER CAUSES OF INTERFACE DERMATITIS

→ Fixed Drug Eruption
→ Erythema multiforme
→ Graft vs Host Disease

MELASMA

Disorder of Pigmentation (Hyperfunctioning melanocytes)

TRIGGER FACTORS:-

1) Sun exposure
2) OCPs
3) ♀ (Chloasma)

♀ > ♂

C/F:-

1) Brown hyperpigmented patches at cheek, nose & photosensitivity.
2) Chronic disease

Rx:-

1) Sunscreen
2) Tyrosinase Inhibitors eg. 1) Kojic acid
   2) Hydroquinone (2-4%) [gold std]
   3) Azelaic acid
   4) Arbutin
3) Topical Retinoid
4) Topical Steroid (melanocyte inhibitors)

KLIGMAN REGIMEN

Topical hydroquinone
+
Topical Retinoid
+
Topical Steroid

SLE

Presents are persistent erythema on Malar area
i. photosensitivity
Rash is in a butterfly pattern.

ROSACEA

⇒ TRIGGER FACTOR
1) Sun
2) Alcohol
3) Hot spicy food
4) Emotional upset
5) Demodex mite
6) Exercise

⇒ STAGES
1) Telangectasia • Intermittent flushing (episodic flushing)
2) Papule • Pustules
3) Rhinophyma (Potato Nose)

⇒ Rx: avoid triggers
Topical steroids (C/I) ⇒ bcoz they cause telangectasia

Orally Doxycycline - Doc
↳ acts by anti-inflammatory effect

Topical Metronidazole or Clindamycin
(anti-inflammatory drugs)

ACANTHOSIS NIGRICANS → misnomer

Black velvety areas in flexures

PATHOLOGY :-

Insulin Resistance

↓

ILGF (Insulin like growth factor)

↓

thick skin.

CAUSES :-

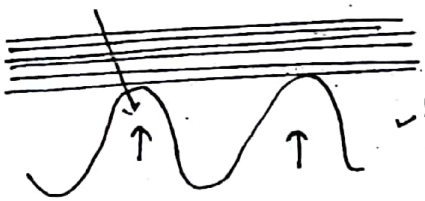
1) obesity Q
2) DM
3) PCOD
4) Drugs (systemic steroids, nicotinic acid)
5) Gastric AdenoCa → Rarest cause Q.

Not a melanin disease

ON BIOPSY :-

PAPILLOMATOSIS Q

HYPERKERATOSIS Q.



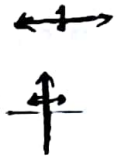
→ papilla touches the SC

CLASSIFICATION OF SKIN LESIONS

1° 2°

PRIMARY LESIONS

	Less than 0.5cm	0.5cm – 1cm	More than 1cm
FLAT	MACULE		PATCH
PUS	PUSTULE		PUSTULE
FLUID	VESICLE		BULLA
SOLID ELEVATION	PAPULE		PLAQUE / NODULE



LEVEL OF BLISTERS

EPIDERMAL	DERMAL / DEJ"
Flaccid	Tense
Ruptures by itself	Doesn't rupture by itself
Doesn't heal ī scarring	Heals ī scarring, milia
Heals ī hyperpigmentation	Heals ī hypopigmentation

SECONDARY LESIONS

1) SCALE
   - visible exfoliation of skin
   - SILVERY SCALES :- Psoriasis
   - POWDERY » :- Pityriasis Versicolor
   - COLLARETTE » :- Pityriasis Rosea → Hanging Curtain sign
   - Small

P LEAF LIKE SCALES - Pemphigus folliaceous

More fluid ○ PF → always ruptures
Less fluid ○ PV

Raw

↓

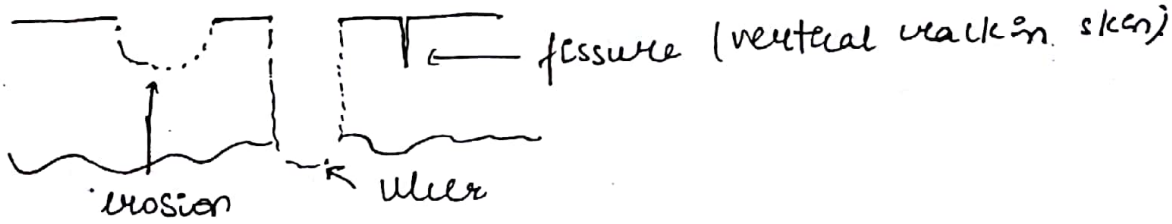
ruptures, fluid released
forms scale on raw surface

PF

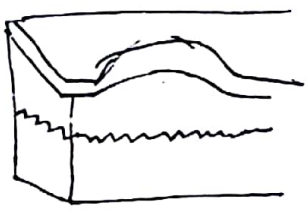
Dsg I → Seborrhoeic areas
→ mucosa → absent

2> CRUST :-
Dried exudate
Usually Black in colour

3> EROSION, ULCER, FISSURE :-



4> LICHEN SIMPLX CHRONICUS (Lichenification)



Thickening
Increased Hyperpigmentation
Skin marking

S/o Chronic itchy skin Disease

HAIRS

HAIRS 2 TYPES

TERMINAL	VELLUS
↓	↓
Thick	Thin

Terminal —miniaturisation→ vellus

Called as

ANDROGENETIC ALOPECIA (AGA)

MALE AGA

- → Starts ⇆ hair Line Recession
- → followed by frontal + vertex balding
- → Lateral + Post Density Ⓝ

Rx = 5% Minoxidil
oral finasteride 1mg/day

Male AGA GRADED from
1 ⟶ 7
Least most

Norwood-Hamilton Grading Scale

FEMALE AGA

No hair Line recession
Widening of central parting

Rx = 2% Minoxidil
Androgen Ⓡ Blocker

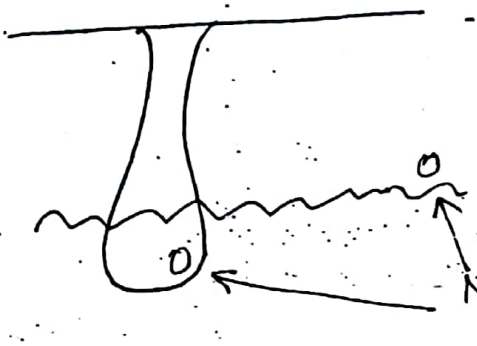
1 ⟶ 3

Ludwig Greading scale

DISORDERS OF MELANIN

(I) DISORDES of HYPO / DEPIGMENTATION

(A) ALBINISM



Tyrosine
↓
Tyrosinase X at birth
↓
Melanin

Neural crest (N)

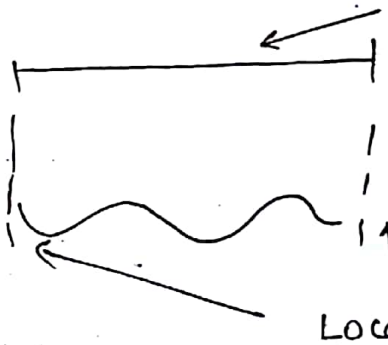
Melanocytes +nt
Melanin absent

Congenital

Diffuse white skin & white hair

No iris Pigmentation

(B) PIEBALDISM



Localised white patch

Localised neural crest dysfunc

NO Melanocytes
NO melanin

Congenital

* Areas of skin without white patch
* White forelock
  - ↓ front
  - ↓ lock of hair

WAARDENBERG SYNDROME

Piebaldism + Deafness + ↑ Inter pupillary Distance

(C) NEVUS DEPIGMENTOSUS / NEVUS ACHROMICUS :-

↓ Birth mark

No colour

Localised white patch since birth.

Pathology :-

Melanocyte ↓

Melanin transfer to keratinocytes ↓

(D) NEVUS ANEMICUS :-

Vascular Ab (N)

Faint hypopigmented patch since birth

Not a melanin disorder

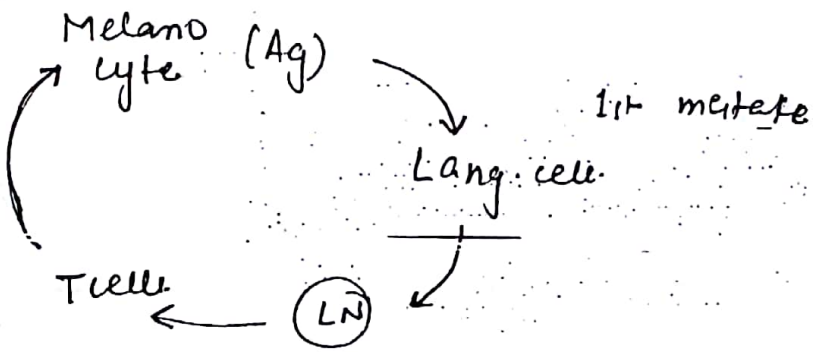
(E) VITILIGO :-

Acquired, not congenital

Autoimmune Disorder

Depigmented Lesion

Mc underlying Disease : Thyroid Disease



H/P :-

No melanocyte

No melanin.

T cells → Skin

T cells → Hair

Depigmented skin

Black Hair.

Depigmented skin → Hair → Leuco-Trichia

* POOR PROGNOSTIC FACTORS :-

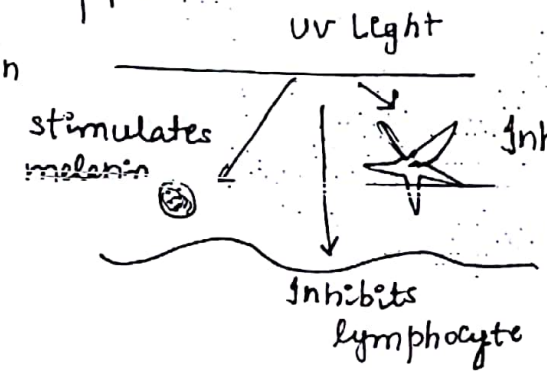
1) On Bony prominences
2) Leucotrichia
3) Lip-Tip
4) Thyroid Disease

CLASSIFICATION OF VITILIGO

LOCALISED	GENERALISED
Focal	Acrofacial
Segmental	Vitiligo vulgaris (M/c)
Mucosal	Universal
Lip-Tip	

Rx = Immunosuppresives

Phototherapy In Vitiligo



UVA Phototherapy

Needs a sensitiser called 'PSORALEN'

- Topical (localised cases)
- Oral (generalised cases)

↓

Wait for 1-2 hours

↓

give UVA light

↓

[PUVA Therapy]

- Psoralen
- UVA

UVB Phototherapy

UVB (290-320nm)

No need for PSORALEN

- Broad Band UVB (290-320nm)
- Narrow Band UVB (311nm) → Best Therapy

For Localised cases:-

Topical immunosuppressives

- Steroid
- Tacrolimus

For Generalised case:-

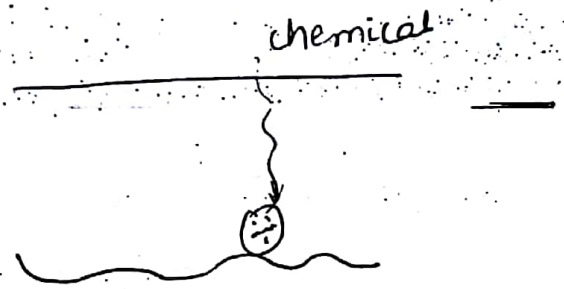
Systemic immunosuppresives

- Steroid
- Azathioprine
- Methotrexate

Surgical (Done ~~for~~ only for stable vitiligo)
↓
No new lesions
∵ past 2 years.

↳ Split skin Graft

(F) CONTACT LEUCODERMA



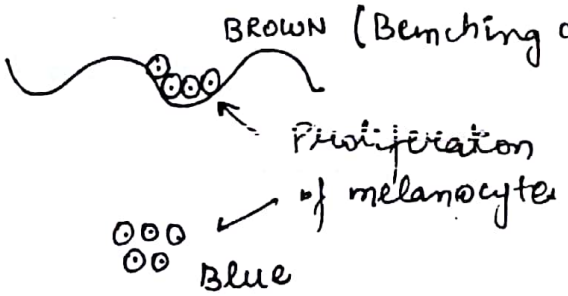
Agents causing Leucoderma

1) Bindi (commonest)
   - Para tertiary Butyl Phenol (PTBP)

2) Footwear / plastic
   - Monobenzyl ether of hydroquinone (MBEH)
     ↓ Most potent agent
     ↓
     useful in universal vitiligo - to depigment ⊗ Remaining skin

(II) DISORDERS OF HYPERPIGMENTATION

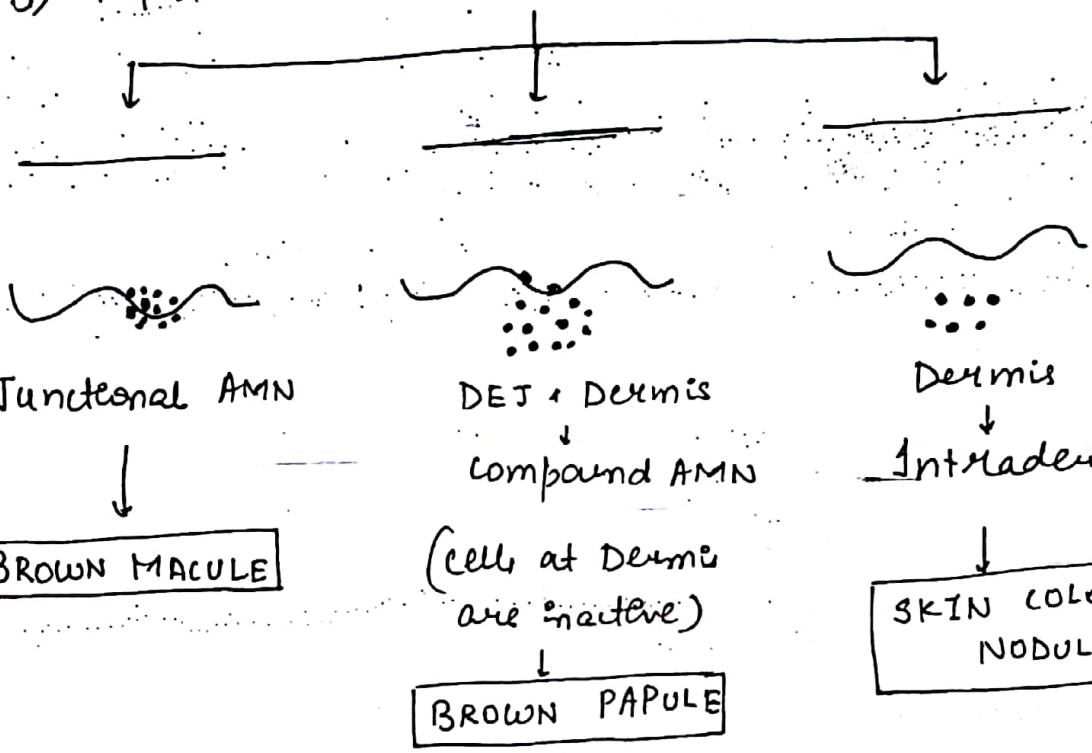
(A) MELANOCYTIC NEVUS (common mole)



1) CONGENITAL MELANOCYTIC NEVUS (CMN)

Giant Nevus (>20cm) has risk for malignancy
↓
Melanoma

B) ACQUIRED MELANOCYTIC NEVUS (AMN)



C) NEVUS OF OTA AIIMS MAY 2015

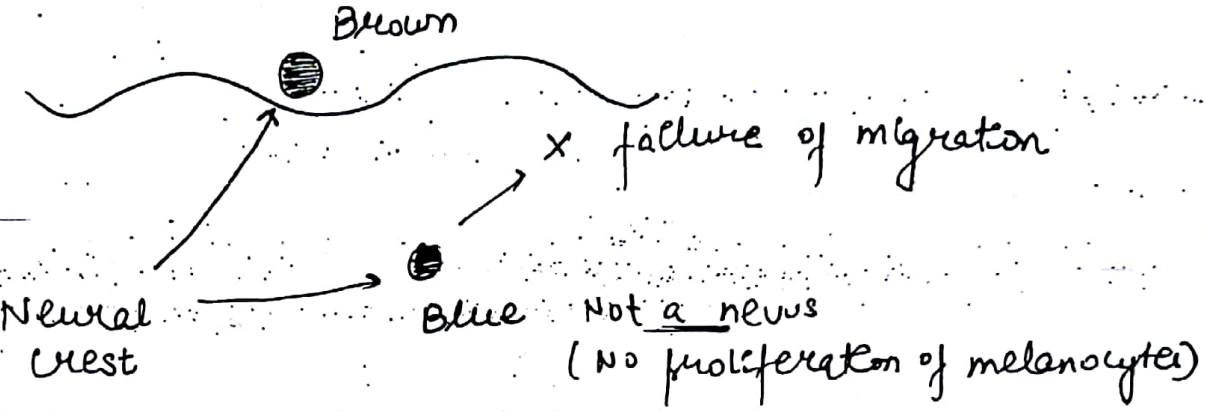
- Dermal melanocytic nevus
- Blue in colour
- along Trigeminal N/V
- U/L
- Congenital
- along ± Blue Sclera on same side

D) NEVUS OF ITO (similar to nevus of ota)

- Shoulder
- ~~Upper Back~~
- clavicular area

✓ Supraclavicular & Lateral Brachial N/Vs

E) MONGOLIAN SPOT



Site :- Lumbosacral area

Self resolving by puberty

F) BECKER's NEVUS Q.

→ Epidermal melanocytic nevus

↓

Hence Brown in colour

- On Shoulder, Chest & Upper Back
- ♂ > ♀
- → Onset → Adolescents
- → Due to androgen sensitivity causing hypertrichosis & Acne inside the Brown patch.

Rx = LASER.

G) MALIGNANT MELANOMA

R/F :- 1) Fair skin

2) Giant CMN

3) Atypical / Dysplastic Nevus

4) Family H/o.

5) Xeroderma Pigmentosum
(DNA. Repair disorder)

6)

CRITERIA

A → ASymmetry

B → Border (irregular)

C → Colour (multiple)

D → Diameter > 6mm

E → Evolution.

TYPES

1) **LENTIGO MALIGNA** (melanoma in Situ)

Brown — Horizontal phase → cells travel in single line along basal layer

Best Prognosis

2) **LENTIGO MALIGNA MELANOMA**

10-15yrs

develops a vertical phase

Not very good

3) SUPERFICIAL SPREADING MELANOMA

H/C type in world

early vertical phase

4) NODULAR MELANOMA

only vertical

POOREST PROGNOSIS

5) AMELANOTIC MELANOMA

→ Non pigmented

→ Variant of ~~xxx~~ nodular melanoma

6) ACRAL MELANOMA

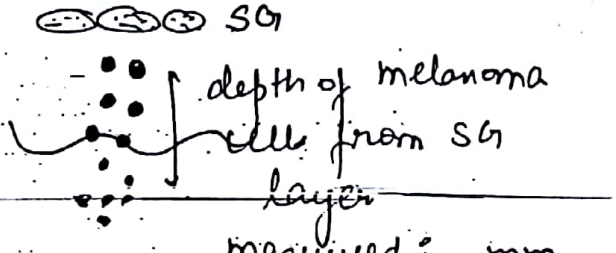
↓

extremity

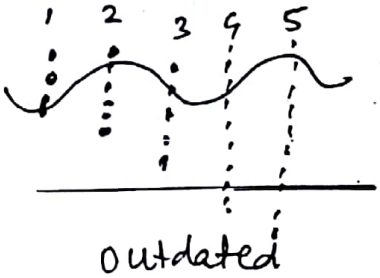
IOC :- Excisional Skin Biopsy

Histological Grading

BRESLOW ← → CLARKE



measured in mm

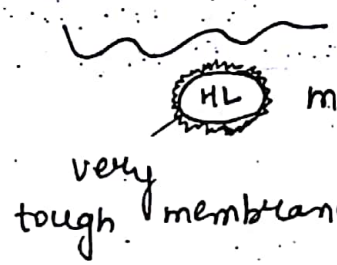


outdated

R_x = Surgical excision.

MAST CELL DISORDERS

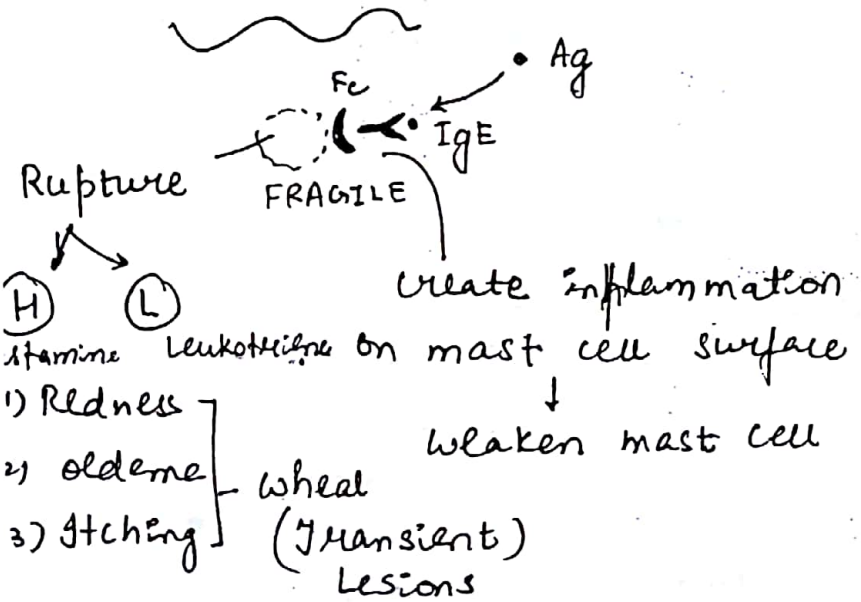
(HL) mast cells ✗



(A) URTICARIA (HIVE)

Disease of fragile mast cell membrane

Depth is ok



TRIGGERS FOR MAST CELL RUPTURE

(A) Acute Triggers

↓

Acute urticaria (< 6 week)

→ Food

→ Drugs

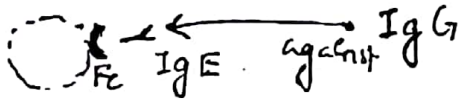
→ Infections

(B) Chronic Triggers

↓

Chronic urticaria (> 6 weeks)

1) Autoimmune urticaria



A/c autoimmune thyroiditis.

2) Idiopathic Urticaria

Trigger is unknown.

3) Physical urticaria

↘ Trigger is physical

eg. cold → cold urticaria

sun → solar urticaria

sweat (eccrine) – cholinergic urticaria

scratch – Dermographism

↓ to skin ↓ to write

water → Acquagenic urticaria

Rx

Acute cases - Remove Ag

Chronic cases - Ag. Removal difficults

▷ Anti-H_1 antihistamines

1st gen
↓
More sedative
eg. Hydroxyzine

2nd gen
↓
Less ~~sedative~~
eg. Levocitrezine
Fexofenadene
Loratidene
↓
preferred

2) Anti-H_2 Antihistamines
eg. → Ranitedine
→ Cimetidene

3) Anti-Leukotriene
eg. → montelukast

4) For Autoimmune urticaria
↓
Immunosuppresives
eg. → steroids
→ cyclosporine
→ Azathioprene
→ Methotrexate

5) Omalizumab ⇒ Anti IgE drug
↓ Ab
monoclonal

(B) ANGIOEDEMA

also called as **QUINCKE'S EDEMA**

Rupture of mast cells in subcutaneous **fat**

↓

Fat doesn't have itch n/vs.

No redness

But oedema is very prominent

Because fat is a loose tenue

↓

eyelids/lips

a/e resp. oedema → sudden death.

Rx = If lips, eyes involved → Inj Hydrocortisone

If resp. → Inj adrenaline

HEREDITARY ANGIOEDEMA

C_1 esterase inhibitor

↓ ⊖

Bradykinin

In HAE → C_1 esterase ~~enzyme~~ inhibitor enzyme deficiency

↓

Hence **Kinin Levels ↑**

↓

Triggering angioedema

AD inheritance

Low complement (C_4) :- Screening Test

TYPES

1 → Reduced amount of enzyme

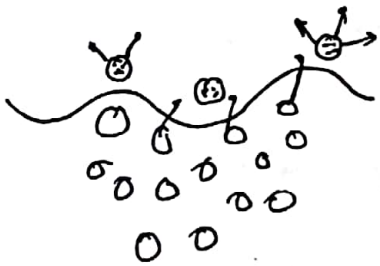
2 → Amount (N), inactive enzyme

(C) MASTOCYTOSIS (URTICARIA PIGMENTOSA)

2nd: mast cells ↑ no.

1st: on rubbing

Brown.



producing melanin ←

Mast cell Proliferation → stimulate basal melanocytes

Presents as BROWN Hyperpigmented patches, plaques or nodules. on TRUNK of a CHILD

Scratching on Brown patch

↓

mast cell rupture (superficial)

↓

Urticaria (red, elevated, itchy)

DARIER's sign ⊖.

↓

Other causes:-

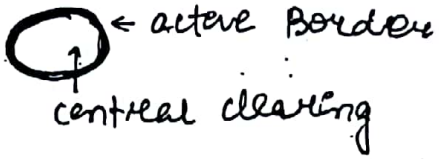
1) xanthogranuloma
2) Histiocytosis
3) Leukemia

~~Pseudo-Darier's Sign~~

Smooth M/s Hamartoma.

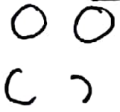
SHAPES OF SKIN LESION

1> ANNULAR (Ring)



eg. a) Tinea [Ring worm]
b) BB Hansen
c) Herald Patch of Pityriasis Rosea

2) CIRCINATE
multiple circles



eg. Circinate Balanitis (Reiter's Disease)

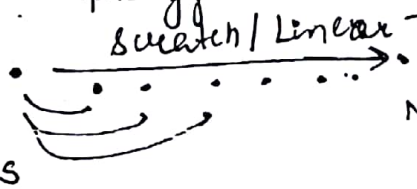
3) LINEAR NODULES , discharging sinuses along lymphatics

Causes

Sporotrichosis :- caused by sporothrix schenkii

FISH TANK GRANULOMA / SWIMMING POOL GRANULOMA
caused by Mycobacterium marinum.

4) ISOMORPHIC or KOEBNER's PHENOMENON
same morphology



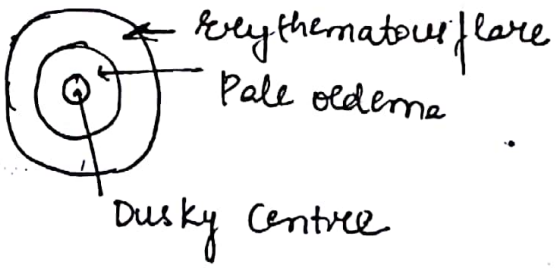
TYPES of KOEBNER's PHENOMENON

TRUE (autoimmune)	FALSE (Viral)	RARE
Psoriasis	Wart (verruca vulgaris)	Darier's Disease
Lichen planus	Molluscum	HHD
Vitiligo	Due to auto-inoculation while scratching.	Erythema multiforme
		Kaposi's sarcoma
		Lichen sclerosis
		Lichen nitedus

REVERSE KOEBNER -
Psoriasis

5> TARGET LESION/ BULL's EYE /IRIS LESION

Eg. Erythema Multiforme.
Erythema Chronicum Migrans



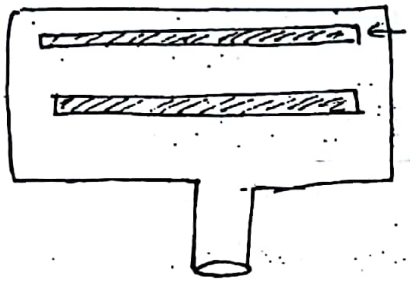
TESTS IN DERMATOLOGY

A) Wood's Lamp
B) Histopathology

WOOD'S LAMP

→ 365nm

→ Composition – Barium silicate + 9% nickel oxide



Use

1) **Tinea Capitis** →

Fungal (Dermatophyte)

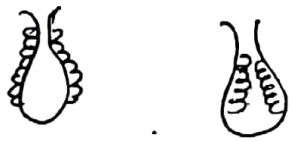
3 species

Trichophyton | Epidermophyton | Microsporum

Keratophilic fungus

↓

Nail, Hairs.



Ectothrix

↓

Usually by Microsporum

↓

⊕ on Wood lamp

Bluish Green fluorescence

endothrix

↓

By Trichophyton.

↓

⊖ on wood's lamp

2) Erythrasma -
caused by Corynebacterium minutissimum
Red pathes → in groin & axilla
Asymptomatic
On Wood's Lamp :- "CORAL RED FLOURESCENCE"

3) Pityriasis Versicolor -
Fungal infection by Malassezia
On WOOD's LAMP. YELLOW FLOURESCENCE

4) Burrow of Scabies -
on wood's lamp - GREEN.

5) Urine In Porphyria -
or Blister fluid
on Wood's lamp - PINK / RED

6) Vitiligo :-
WHITE

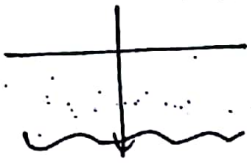
7) ASH LEAF MACULE.
WHITE & more prominent on Wood's

8)

PORPHYRIA

Ⓝ

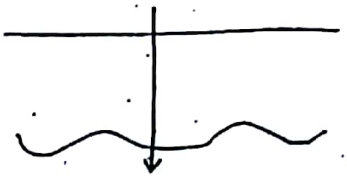
visible light



Neutralised by Ⓝ Porphyrins in dermis

PORPHYRIA

visible soret light



Ab Ⓝ Dermal porphyrin

↓

No neutralisation of light

↓

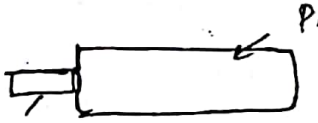
Dermal Damage

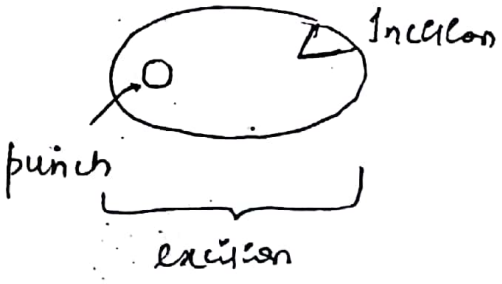
↓

Dermal tense bleister in light exposed areas

B) HISTOPATHOLOGY-

1) By Punch Biopsy Instrument





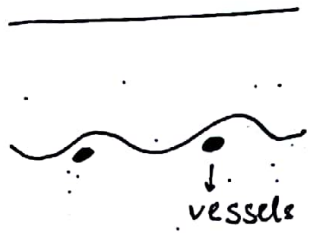
2) Incision Biopsy

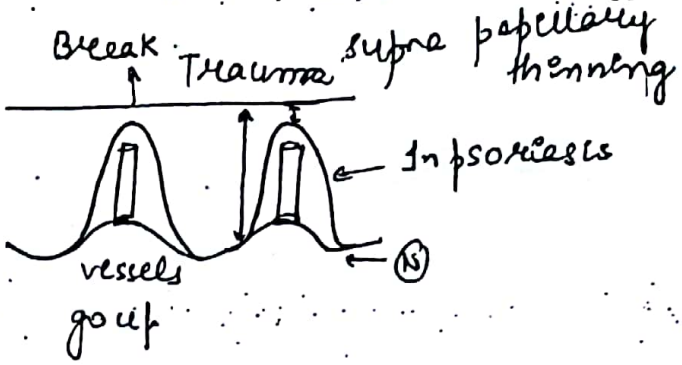
3) Excision Biopsy

4) Shave Biopsy ** (JIPMER)

Superficial Removal of skin ⊂ horizontal movement of Blade used for superficial elevation Lesions

1) Psoriasis :-





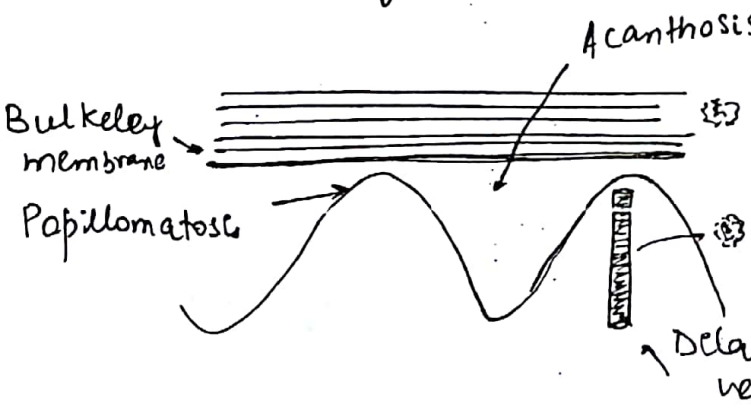
Intermittent pen point Bleed
= AUSPITZ SIGN.

Auspitz sign is demonstrated after GRATTAGE TEST (scraping)

↓

on scraping, candle wax like scales are dislodged

Bulkeley membrane is a thin membrane at the lower part of corneum & need to be dislodged to see bleeding points.



Munroe's microabscess (s. corneum)
S. granulosum → absent
Spongiform pustule of Kogoj (s. spinosum)
↑ neutrophils

Less neutrophils in corneum ⇒ MICROABSCESS.
not a macroabscess

More neutrophils in corneum ⇒ MICROABSCESS + MACROABSCESS
↓
Pustular Psoriasis
↓
sterile pustule.

2> DERMATITIS HERPETIFORMIS:-

Papillary tip neutrophils

" " microabscess

Not ~~macro~~abscess

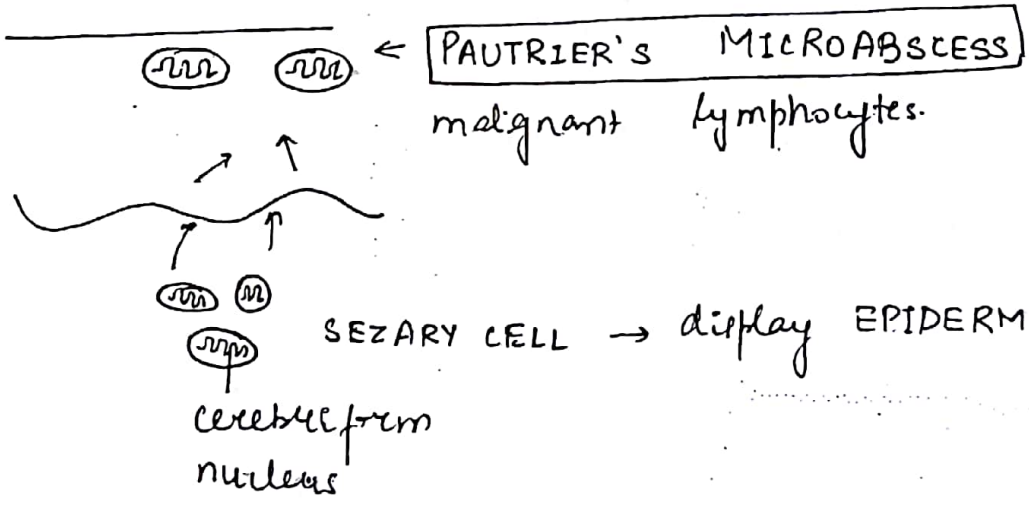
3) MYCOSIS FUNGOIDES (MF)

Misnomer.

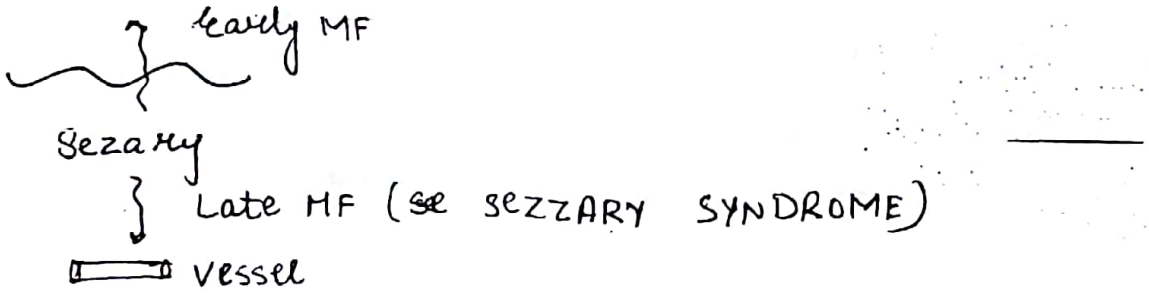
No fungus.

A type of CTCL (Cutaneous T. cell Lymphoma)

CD_4 ⊕ malignant dermal T cell.



When sezary cell go up ⇒ Early MF



FEATURES OF SEZZARY SYNDROME :-

1). Sezzary cells in Blood

2) Generalised Lymphadenopathy

3) Erythroderma/ Exfoliative Dermatitis

4) means > 90% Body surface area involvement

Erythro - Red

Exfoliative - Scaly/ falling off

4/F - Red scaly skin in > 90% Body surface

STAGES of MF :-

1) (I) → patch stage MF

(II) → plaque stage MF

(III) → Tumour

(IV) → Erythroderma stage

Rx of MF :-

1) EARLY :-

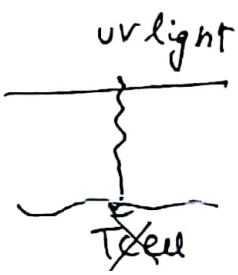
Rx from outside

Skin Directed Therapy (SDT)

a) Topical steroid

b) Phototherapy

c) Electron Beam Therapy (EBT)

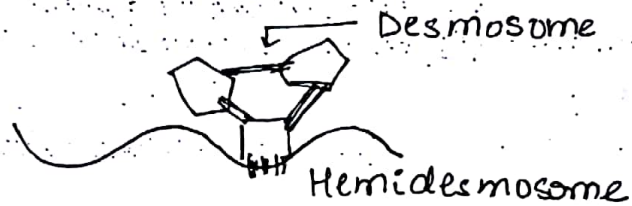


2) LATE :-

Rx from inside.

Chemotherapy

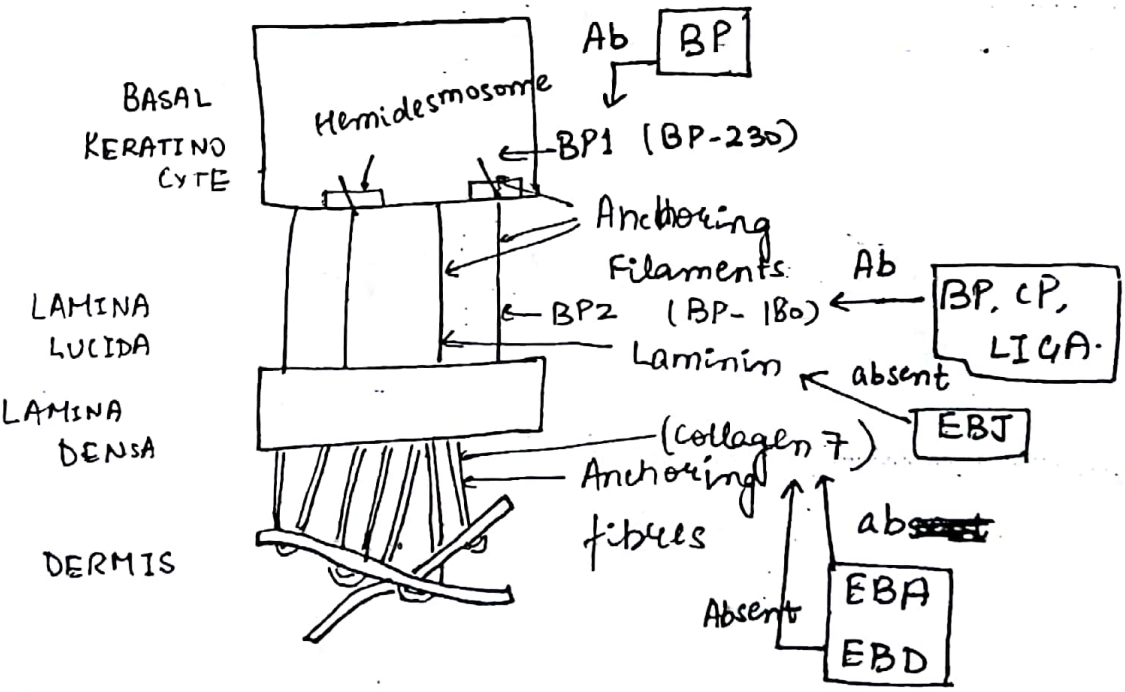
DERMO-EPIDERMAL JUNCTION (DEJ)



↓

contains Protein called

BP-1 (BP-230)



BP → Bullous Pemphigoid

CP → Cicatricial "

LIGA → Linear IgA disease

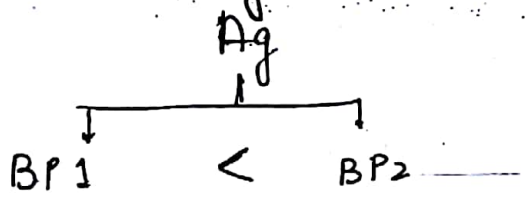
EBA → Epidermolysis Bullosa Acquisita

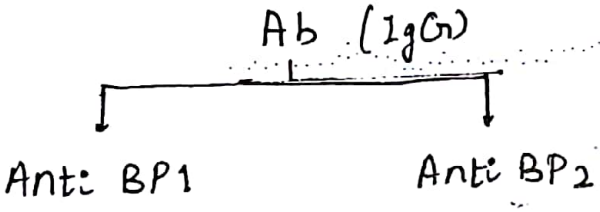
SALT SPLIT TECHNIQUE

Splitting of skin @ Junc' of Lucida & Dense on putting the skin in saturated sol' of salt

Roof Blisters	Floor Blisters
↓	
BP, CP, LIGA; EBJ	EBA, EBD

(I) Bullous Pemphigoid





Level of Blister = Lucida (Acquired)

DIF ⊕

(II) Cicatricial Pemphigoid

Ag → BP2

Ab → Anti BP2 (Ig G)

Level of Blister = Lucida (Acquired)

DIF ⊕

(III) LIGA

Ag = BP2

Ab = Anti BP2 (IgA)

Level = Lucida

DIF ⊕

(IV) EBJ

Ag = Nil

Ab = Nil

Absent Laminin since Birth

Level = Lucida

DIF = ⊖

(V) EBD

Ag = Nil

Ab = Nil (absent collagen 7 since Birth)

Level = Dermis

DIF = ⊖

(VI) EBA

Ag = Collagen 7

Ab = Anti collagen 7 (IgG)

Level = Dermis

DIF = ⊕

DIF

Sample is skin Biopsy from Perilesional skin for DIF. while for routine H & E Lesional Biopsy is taken

Pemphigus Foliaceus ◇◇◇] IgG, C_3 in fishnet intercellular pattern

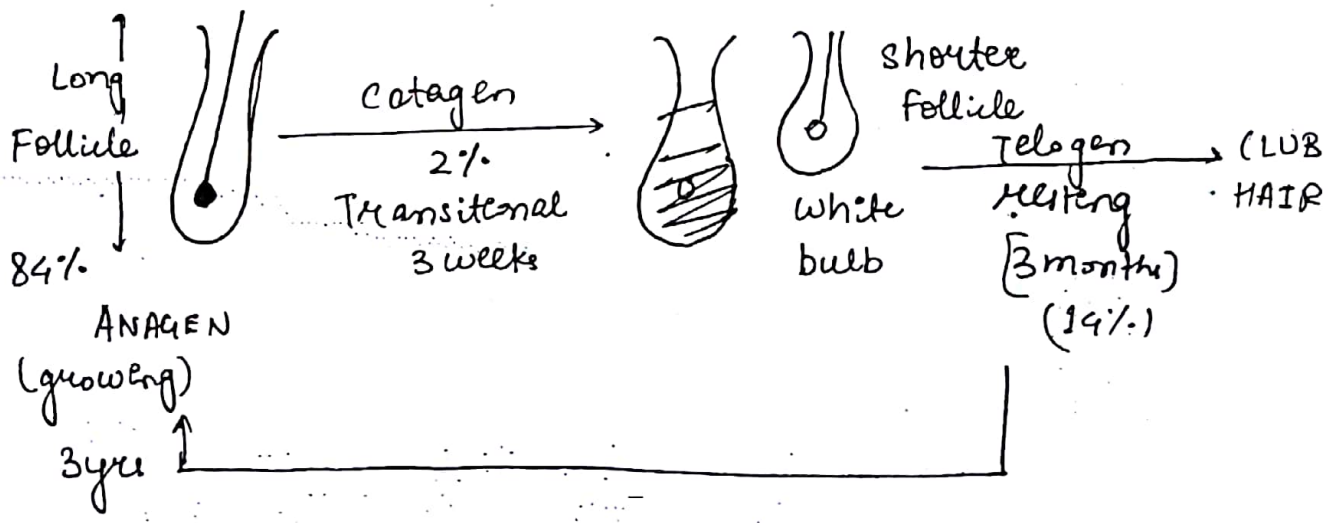
Pemphigus vulgaris ◇◇◇]

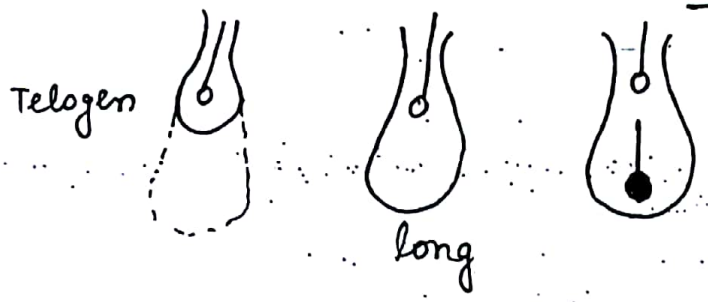
Linear IgG, C_3 → BP/CP/EBA

Linear IgA = LIGA.

I Dermosome (Dsg-1) green. ⟷ IgG Ab green ⟷ Anti-Anti IgG green

SCALP HAIR CYCLE





→ Anagen pushes out the telogen.
↓
telogen loss
100 hairs/day

EFFLUVIUM (Abn falling of Hair)

TELOGEN	ANAGEN
>100 hairs/day	1 hair/day
↓	↓
Telogen effluvium	Anagen effluvium
	eg. Hair Loss in chemotherapy

- ACUTE TELOGEN EFFLUVIUN

Hair loss occurs acutely after 3 months of an acute Metabolic Insult to the body

eg Severe Fever
Labour

No Rx Required, only Counseling.

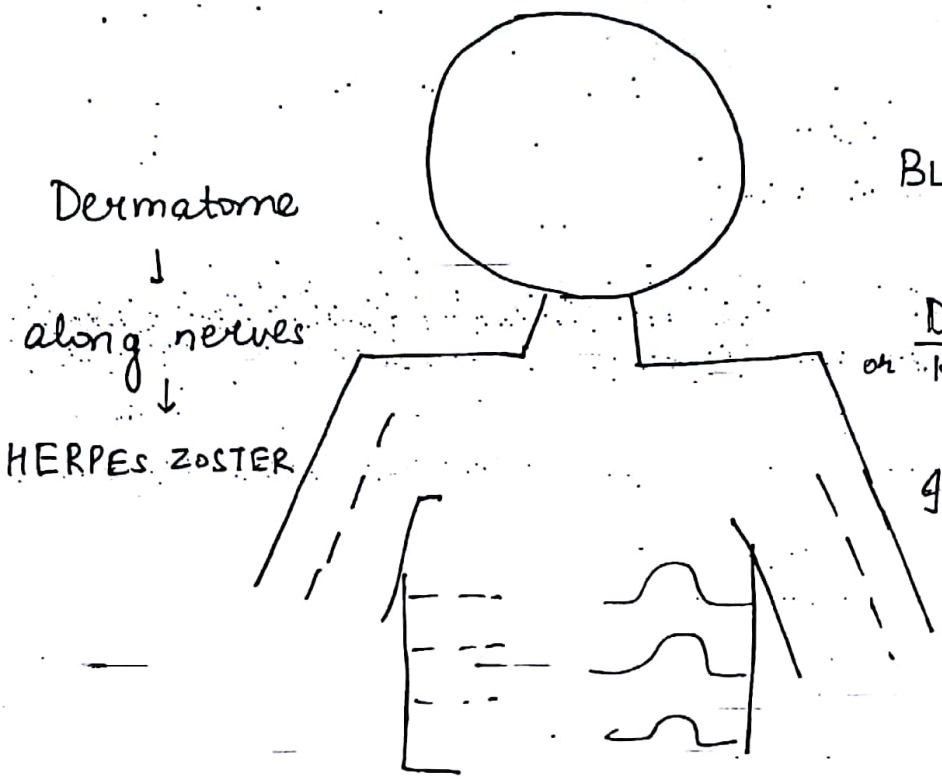
CHRONIC TELOGEN EFFLUVIUM

Hair Loss occurs chronically after chronic stressors

eg. Hypothyroidism
Anaemia
Nutritional Deficiency

Cause need to be Rx.

BLASCHKO LINES



Dermatome
↓
along nerves
↓
HERPES ZOSTER

BLASCHKO LINES
↓
Developmental Lines
or Keratinocyte Migration Line
↓
Incontinentia Pigmenti
Linear verrucous epidermal nevus

INCONTINENTIA PIGMENTI (AIIMS)

~~AR~~ ~~Dis~~ X-Linked Dominant Disorder

4 stages
Blister
↓
Verrucous (cauliflower like)
↓
Hyperpigmentation
↓
Hypopigmentation

LINEAR VERRUCOUS EPIDERMAL NEVUS [AIIMS]

Along BLASHCKO cauliflower epidermis since birth

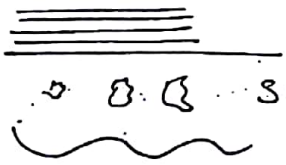
Presents as cauliflower like masses along Blaschko line since birth. ↓ persists throughout life.

Histopath:-

Epidermolytic Hyperkeratosis

↓ Inepidermis ↓ Breakdown.

In Stratum Granulosum.



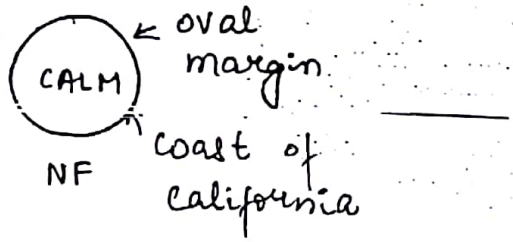
NEUROFIBROMATOSIS

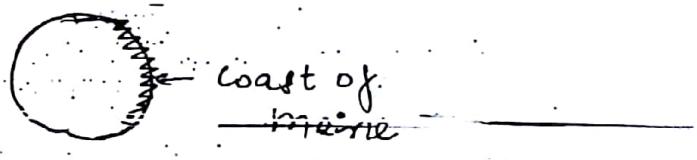
Skin Features :-

NF 1 → also called Von Recklinghausen Disease

1> AXILLARY FRECKLES (pathognomic)
↳ CROWE'S SIGN

2> CAFE-AU-LAIT MACULES (CALM)
↳ also seen in
a> Tuberous sclerosis
b> (N) people
c) Mc-Cune Albright Syndrome
d) Fanconi anemia





3) NEUROFIBROMA - BUTTON HOLE SIGN ?

On pressing a blunt object on neurofebroma resistant is not felt in derma due to a dermal defect.

TUBEROUS SCLEROSIS / EPILOIA

Skin features :-

Tuber → potato like tumours in CNS.

Epi → epilepsy

Lol → Low

Io → IQ.

A → Adenoma sebacea.

1) ASH LEAF MACULE

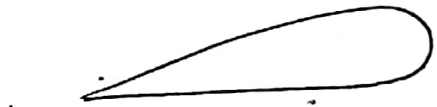
Earliest

M/c sign

tnt at birth.

Hypopigmented patch.

Becomes more visible on wood's lamp.



pointed oval.

> 3 is significant

2) CONFETTI MACULE

↓

small circular.

hypo

→ small hypopigmented Macule like confetti

3) ADENOMA SEBACEUM

minomer

No sebum relation

Skin coloured papules on face.

Onset - 2-5yrs of age

Histopath → Angiofibroma.

4) **SHAGREEN PATCH/PLAQUE**

Shark skin → rough.

Roughened plaques on LS Region

H/P → collagenoma

5) **KOENEN'S TUMOUR**

→ periungual fibroma

→ at puberty

CONNECTIVE TISSUE DISEASE

(I) LUPUS ERYTHEMATOSIS

- SKIN → **DLE**
  - → Discoid (coin like)
    - periphery Active
    - centre inactive
  - → Nummular
- SKIN + SYSTEMIC → **SLE**
  - Cause (B)
    - cicatricial alopecia
    - non cicatricial alopecia.

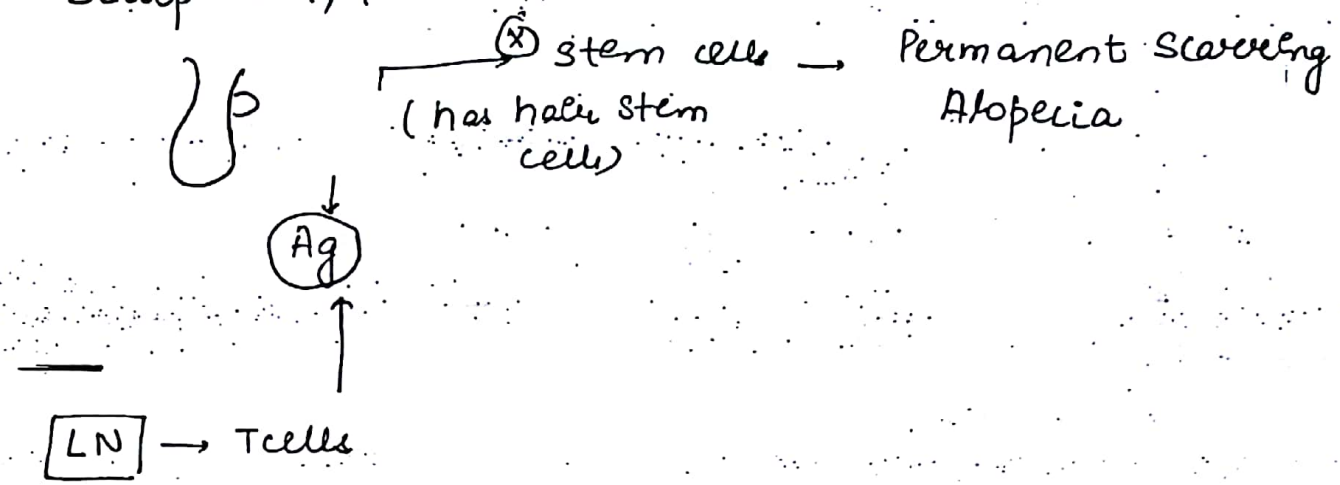
DLE :- → only cicatricial alopecia

Photosensitive

Autoimmune

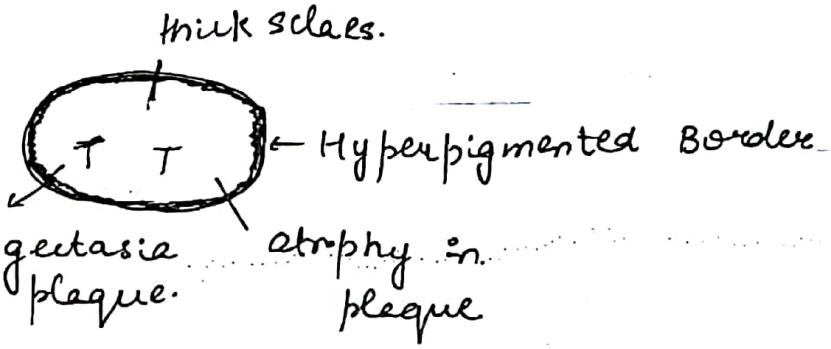
Hair follicle Disorder

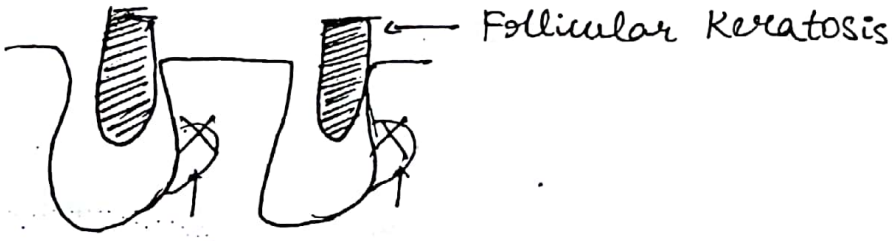
Scalp Hair/ Facial Hair :-

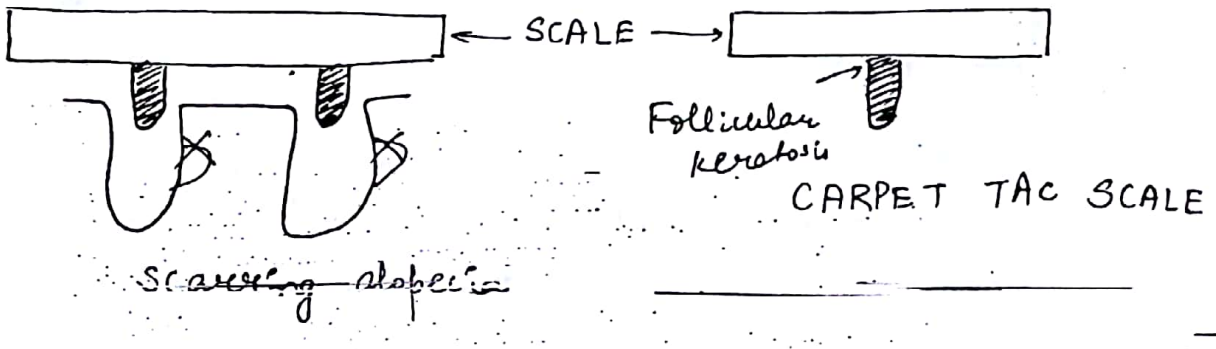


C/F :-

Discoid plaque





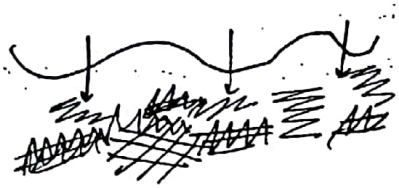


SLE

SLE pt's sometimes have thin / fragile / easily broken hair
↳ [LUPUS HAIR]

(II) SCLERODERMA

excess collagen ↕ unpinchable / Hard Bound Down skin.



- only SKIN → MORPHEA
  - M/c site = Trunk
  - Linear morphea on scalp causes Linear areas of cicatricial Hair Loss resembling cut c sickle.
  - ⇓
  - en-coup-d-sabre
    - a
    - cut
    - c
    - sickle
- SKIN + SYSTEMIC
  - Few systems → LIMITED SYSTEMIC SCLEROSIS
    - CREST SYNDROME
      - C = Calcinosis
      - R = Raynaud's phenomenon
      - E = Esophageal dysmotility
      - S = Sclerodactyly
      - T = Telangectasia
  - Many systems → DIFFUSE SYSTEMIC SCLEROSIS

SYSTEMIC SCLEROSIS

CRITERIA for Diffuse

MAJOR	MINOR
Essential	2 or 3
• Scleroderma proximal to the metacarpophalangeal Jt.	• Sclerodactyly • Digital pitted scars • Bibasilar pulmonary fibrosis

SKIN FEATURES -

1) Mask like face due to facial tightening
2) Purse string mouth / microstomia 
3) Peri-oral Rhagades
4) Frequent Raynaud's phenomenon
5) Salt & Pepper Pigmentation

(III) DERMATO MYOSITIS

Skin — Proximal M/s weakness

↓

(A) Lilac/Purple Colour

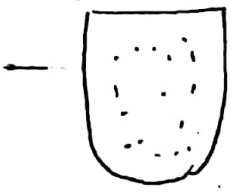
- around eyes ⊖ photosensitivity → Heliotrope Rash.
- in shawl area → SHAWL SIGN
- on Interphalangeal or Metacarpophalangeal Jts → GOTTRON's PAPULE

Ⓑ Mechanics Hand.
↳ Rough Hand due to palmar Hyperkeratosis

NAIL DISORDER

1) PITING DISEASE.

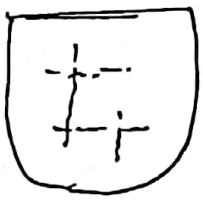
Due to involvement of proximal nail matrix.



RIDL

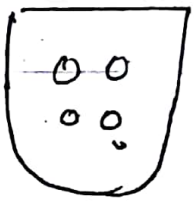
Random
Irregular.
Deep
Large

Psoriasis



Superficial
Regular
Geometric

Alopecia areata



Coarse large pits.

Eczema

H/c sign of ~~ps~~ nail psoriasis.

2) NAIL PSORIASIS

a) pitting is the H/c sign but not specific to psoriasis
Having pits → ↑ chance of getting jt involvement in psoriasis pt.

b) Salmon Patch / Oil Drop sign :- ~~(Pathognomic of psoriasis)~~
Red faint

3) Subungual hyperkeratosis
4) Onycholysis
5) Splinter heamorrhage.

3> NAIL LICHEN PLANUS (JIPMER)

Longitudinal Ridge
Pitted nail
Thinning of nail plate
Dorsal Pterygium (extension of proximal nail fold to nail bed.)

2o Nail Dystrophy. (Trachyonychia) JIPMER
or Sand Paper nail
↓
Also seen in psoriasis
& alopecia areata

~~Inverse~~

4> INVERSE (VENTRAL) PTERYGIUM Q.

Skin from nail bed fuses with the undersurface of nail bed seen in scleroderma.

5> HALF & HALF NAIL

Seen in Chronic Renal Failure
Reversible on hemodialysis.

due to anemia
↓
Proximal 50% white

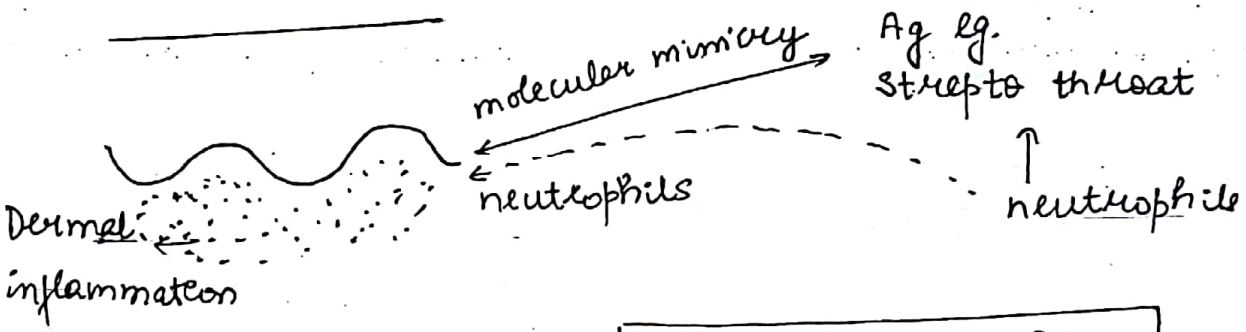
Distal 50% Brown.
↓
due to melanin deposits on nail bed
⋮
due to ↑MSH secretion in CRF

6) BEAU'S LINE

Horizontal groove on the nail plate.
Due to temporary suppression of nail growth due to past fever or Local nail fold trauma
No Rx Required.

NEUTROPHILIC DERMATOSIS

Neutrophilic accumulation in Dermis



Rx = Antigen Removal + Anti-Neutrophilic Drug

1) DAPSONE
2) COLCHICINE
3) STERDIDS - oral

Dermatitis Herpetiformis → DOC :- Dapsone
Behcet Syndrome
Sweets syndrome
Pyoderma Gangrenosum
} DOC : steroids

PYODERMA GANGRENOSUM

No pyoderma, no gangrene
Present as Very Painful leg ulcer ~ Purple Margin around it
ulcer → undermined

Associated c
- IBD
- Haematological malignancy

SWEET SYNDROME / ACUTE FEBRILE NEUTROPHILIC DERMATOSIS.

Presents acutely c red, oedematous, painful plaque on extremities c fever & Jt pains.

Resembles cellulitis.

DOC :- Steroids.

Associated c
— Strepto (H/c)
others — AML, Drugs ♀

Histopath :-
Plenty of neutrophils on dermis

Beh

BEHCET'S DISEASE

MAJOR

Recurrent aphthous ulcers
↓
Superficial, round/oval, painful c a red margin around it.

MINOR (any 2)

+ Recurrent genital aphthous ulcers
→ Eye Lesions (Panuveitis)
→ Skin Lesions (Erythema nodosum, pustules)
→ ⊕ Pathergy test

PATHERGY TEST :-

Inflammatory Papule or Pustule at the site of intradermal Inj^n on the forearm. (after 48 hrs)

Seen in-

1) Behcet's
2) Pyoderma Gangreenosum
3) Sweet's syndrome (rarely)
4) RA.
5) IBD

CUTANEOUS TB

A) EXOGENOUS TB

1) TB chancre
   ↳ means ulcer.

Flask shaped.
undermined

2) TB verrucosa cutis (TBVC)
   ↓ cauliflower ↓ skin.

3) LUPUS VULGARIS
   ↳ H/c typ of cut. TB in adults.

sputum
TB
47

Previous exposure to TB
↓
Post 1°
↓
High immunity
TBVC
(paucibacillary)

No previous exposure to TB
(TB naive, patients)
↓
1° TB
↓
Pt. has low immunity to TB
↓

TB chancre
MULTIBACILLARY (MB)

LUPUS VULGARIS ✪ AIIMS.

Healing ⊂ central scarring

Progressive Lesions

Buttocks.

DIAGNOSIS :- 1) DIASCOPY

Pressing ⊂ a glass slide

↓

— Yellow Brown Nodules visible

(APPLE JELLY NODULES)

↳ also seen in

Sarcoidosis

Leishmaniasis

2) SKIN BIOPSY

Non-caseating tuberculoid Granuloma

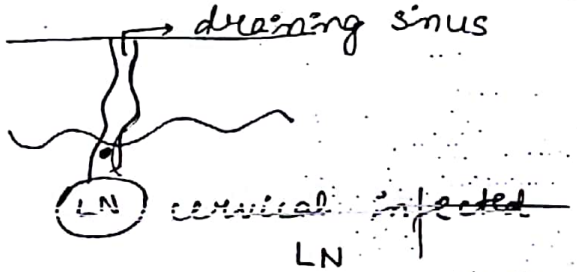
Lupus vulgaris ⇒ paucibacillary

Central clearing	Central scarring	Central crusting
↓	↓	↓
Tinea	Lupus vulgaris	Leishmaniasis

(B) ENDOGENEOUS TB

1) SCROFULODERMA → M/C in children.

2) PERI-ORIFICIAL



Perf oral + Perf anal ulcer ⇒ severe int. TB.

(C) TUBERCULID → daughter Lesion
↓
mother Lesion.

* Daughter Lesions initiate Hypersensitivity in skin causing inflammation also leading to fragmented bacilli in skin & can't be cultured

Mantoux test is strongly positive in Tuberculid.

3 TYPES (Depending on size of daughter Lesions)

Daughter is very tiny (micropapule size)

Micropapular Tuberculid or Lichen scrofulosorum

C/F- Grouped micropapules on trunk

H/p- Perifollicular non-caseating TB granuloma

Daughter is small

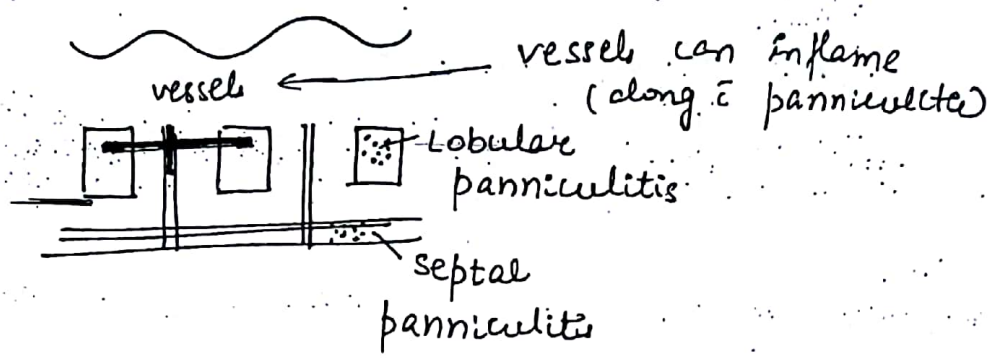
Papulo-necrotic Tuberculid

Daughter is Large

- Nodular tuberculid Erythema ~~no~~ induratum
- Bazin's Disease

C/F- Red, tender, nodule on calf & ulcerates

PANNICULITIS



SEPTAL PANNICULITIS

- ī vasculitis
- ī out vasculitis
  - eg. Erythema Nodosum

LOBULAR PANNICULITIS

- ī vasculitis
  - eg. Nodular
    Tuberculoid
- ī out vasculitis
  - eg. 1> Pancreatic Panniculitis
    (Acute/chr. pancreatitis/ Cancer)
  - 2> Post steroid panniculitis
  - 3> Lupus panniculitis
  - 4> Subcutaneous fat necrosis of newborn

ERYTHEMO NODOSUM

Red, Tender nodules on **shin** & **never ulcerate**

CAUSES

NO - No cause, Neutrophilic Dermatoses
(Behcet's Disease, sweet syndrome)

D - Drugs (iodides, bromides, sulfonamides

O - OCP

S - Sarcoidosis

U - Ulcerative Colitis (also Crohn's)

M - Microbes (strepto)
Maternity • Malignancy (Hematological)

FEATURES	EN	ENL	SWEETS SYNDROME
Neutrophils	+	+	⊕
Histiocytes	+	+	⊖
Vasculitis	−	⊕	⊖

Rx of EN:-

1) Bed Rest
2) Neutrophil Removal Drugs (steroids), Dapsone, colchicine)
3) Removal of cause

HANSENS DISEASE

M. Leprae
↳ grows in (cool) areas
- Skin
- n/v (superficia)

Nerve 1st —then→ Skin.
(thicken the n/v)

Nerve involved but doesn't involve skin = **Pure neural Leprosy**

H/c peripheral n/v involved (UL) = **Ulnar**
LL = **Post Tibial**

H/c deformity = **CLAW HAND**

M/c cranial n/v = **FACIAL N/V**
↳ Lagophthalmos

Biopsy taken from Radial cut > Sural n/v

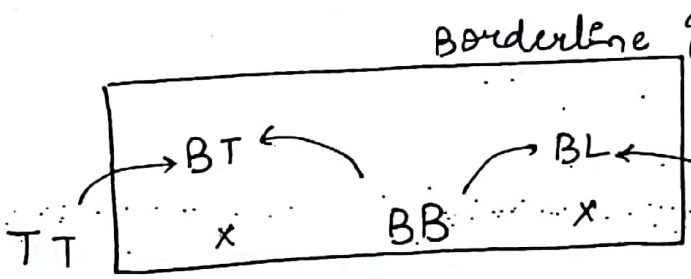
Commonest Hansen in India = BT HANSEN

Commonest Int. Organ Involved = Testis (bcoz it has low temp)

Organ never involved in HANSEN = uterus → ♀
CNS → ♂

Earliest sensation lost = Hot & cold differentiation >
Cold > Hot > light touch > pain > crude touch

Sensation never Lost = Proprioception, vibration.



Good Immunity — Intermediate Immunity — Poor Immunity

Tuberculoid — Borderline — Lepromatous

Tuberculoid — Borderline (mid Borderline) — Lepromatous

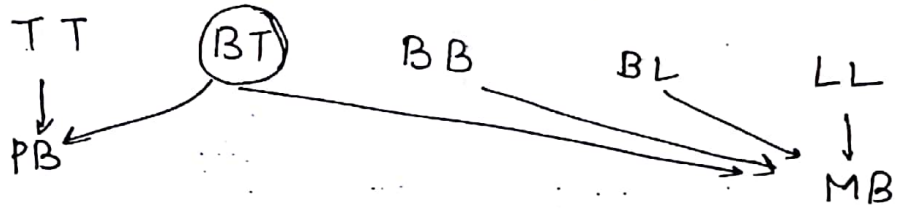
RIDLEY JOPLING CLASSIFICATION

Based on.

1) Clinical
2) Bacteriological (slit skin smear - SSS)
3) Histological (skin Biopsy)
4) Immunological (Lepromin testing)

If there are >10,000 Bacilli/gm of skin → MULTIBACILLARY HANSEN

If there is <10,000 Bacilli/gm of skin → PAUCIBACILLARY HANSEN.



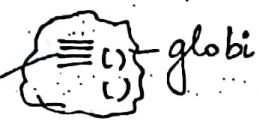
TT → Immunologically stable

BT → BB → BL → LL

Downgrading [cout ✗]

TT Hansen on Biopsy shows Perivascular, Pericadneral neural Granuloma

LL on Biopsy shows: Foam cell, Virchow cell, Lepra cells (Dermal macrophage full of leprosy Bacilli) —



cigarette shaped

Special stain

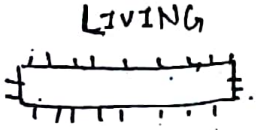
1) Zn Stain

2) Fite Stain. → Image
[Blue background
Red Bacilli.]

Entry of Organism
↓
sent to LN

Th 1 (T cells) → Toward TT

Th 2 (B cells) → Toward LL.



MDT →

$10 cm^2$ Ag
↑
10 units of immunity

$100 cm^2$ of Ag
100 units of immunity
(Hypersensitivity)

T cell	B cell
Upgrading/Type 1 Lepra Reaⁿ/ Reversal Reaⁿ	Type 2 Lepra Reaⁿ

Hypersensitivity Towards TT side = TYPE IV
Presents as Neuritis
& Nerve Abscess
↓
also called TYPE 1 LEPRA RxN of N/V.

Rx for Neuritis ⇒ MDT + Oral steroids.
Rx for N/V Abscess ⇒ I & D.

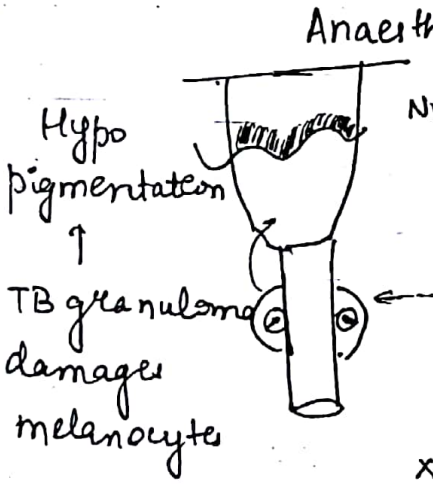
Hypersensitivity toward LL Side = TYPE III
Presents as vasculitis
Called as TYPE -2 LEPRA Rxn. or Erythema Nodosum Leprosum

Effect of MDT on-

TT	BT	BB	BL	BB LL
↓	↓	↓	↙ ↘	↓
T cell hyper	T cell hyper	T cell hyper	T cell hyper	B cell hyper
↓	↓	↓	↓	↓
Type 1 Lepra	Type 1 Lepra	Type 1 Lepra	Type 1 Lepra	Type 2 Lepra

B cell hyper
↓
Type 2 Lepra

TT HANSEN :-



⇒ 1 thickened N/V + 1 skin Lesion (saucer Morphology)

INDETERMINANT HANSEN :-

Presents as Hypopigmented patch on cheek in children.
(N) sensation (N) sweating

D/D of Hypopigmented Patch on cheek in child

- ± fine Scaling → Pityriasis alba
- Non scaly, atrophic from endemic area → Indeterminate Hansen.

FATE

Most pts. upgrade ← IH → some downgrade

N TT

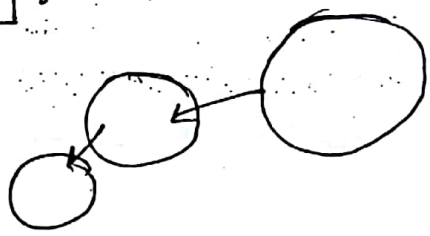
Histopath :-

Perivascular or Periadnexal Lymphocytes

Bacillus not seen.

p **BT HANSEN** :-

Satellite Lesions (3-10)



few thickened n/vs

Original BT ○ → on MDT BT in type 1 Lepra

← ← ← ← ← Slow upgrade No clinical Type I

Fast upgrade Clinical Type I.

BB HANSEN :-

1) Inverted saucer
2) Punched out
3) Annular (AIIMS).
4) Swiss-cheese

(10-30 Lesions)

TT

Granuloma size ↓, Hence
Sensations improve
Sweating "
Dry Lesions become shiny Lesions
Hypopigmentation ↓
Symmetry of patches ↓ N/Vs ↑
Patches ↑ in no. but ↓ in size

LL

BL HANSEN

Many, almost symmetrical Lesions · almost symmetrical n/vs

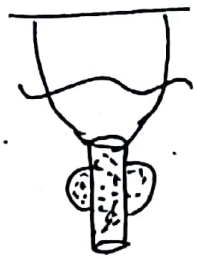
Inverted saucer / punched out Lesions

Uncomfortable Lesions.

LL HANSEN

Diffuse infilteration of skin · Peripheral N/vs

1) (N) sensations (N) sweating, ill defined Borders
2) Ear Lobe infilteration
3) Lateral Madarosis
4) Gynaecomastia due to testicular involvement
5) Saddle nose - collapse of bridge of nose
6) Nasal septal Perforation
7) B/L lagophthalmose - ← due to facial n/v involvement [corneal ulcer]
8) Groove Syndactyly Anaesthesia ← ~~due to peripheral~~ neuropathy



Bil symmetrical n/v involvement

Thickening of n/v in LL is due to invasion.

EARLY SIGNS:-

Nasal stuffiness

Epistaxis (JIPMER 2014)

Leg oedema

Nodular LL = LEONINE

↳ painless nodules

Due to unequal invasion of by bacilli

• site of Biopsy:-

Non nodular LL = LUCIO

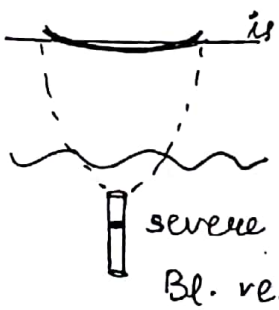
↓

means Beautiful (mexican)

also called BEAUTIFUL LEPROSY (Lepra Bonita)

wrinkle less/ shiny skin, look younger] due to subcutaneous invasion by bacilli thus stretching skin

LUCIO REACTION:-



↳ vessels becoming thrombosed.

HISTOID LEPROSY:- Q.

type of LL ↓ dapsone ~~resistance~~

(N) skin along ↓ Papulo-nodules

ERYTHEMA NODOSUM LEPROSY

Red — Nodule

Tender Nodule on extremities (New Lesions)

SYSTEMIC FEATURES

Immune Complex Deposit
- Fever ✓
- It Pain ✓
- Uveitis ✓
- GN ✓
- Orchitis ✓
- Hepatitis ✓

Cytokine Involved in ENL = **TNF α**

Hence TNFα Inhibitors (**Thalidomide**) is given in **ENL**

TYPE 1	TYPE 2
NSAIDS	NSAIDS
Oral Steroids - Doc	Oral Steroid - Doc
Chloroquine	Chloroquine
Azathioprine	Azathioprine
Cyclosporine	Thalidomide
	Clofazimine

RECURRENT ENL

Step 1 - Prednisolone 3 months + Clofazimine
- 1mg/kg/day
- 100 mg TDS - 3 months

↓

Step 2 - only clofazimine 100mg BD - 3 months

↓

Step 3 - ~~clofazimine~~ 100 mg OD - 3 months

HISTOPATH OF LL

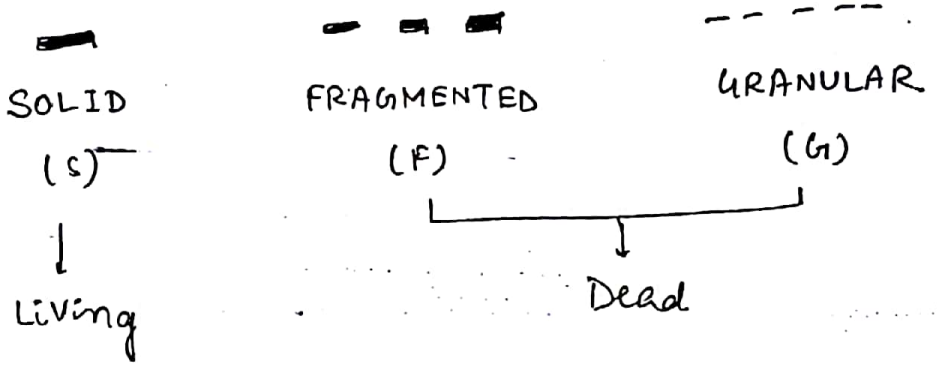
GRENZ ZONE

zone of sparing in upper dermis ~ cut foam cells. This may be a zone of better immunity in the dermis

Slit Skin Smear

Sites : Skin Lesions > Ear Lobe → Best site

3 type of staining Pattern



S + F + G = Bacteriological Index (BI)

S = Morphological Index (MI)

BI remains +ve even after Rx [↓ by 1+ every year on Rx]

BI is measured from 1+ to 6+

eg. BI = 3+ before MDT

↓ ← Rx eg for 1 yr

(2+) ← stop Rx

↓

1+ automatically after 1 yr

↓

0 " " "

MI becomes -ve after Rx

RELAPSE

BI ↑ by 2+ over the previous value
clinically by new skin lesions + new thickened n/vs

SSS is +ve if u have more than 10,000 bacilli/gm (Multibacillary) of tissue.

SSS is -ve if less than 10,000 bacilli/gm of tenue (Paucibacillary)

SS is -ve in ~~there in~~ -

TT
BT
Indeterminate Hansen
Pure neural Hansen

SS is +ve in -

BT
BB
BL
LL

LEPROMIN SKIN TEST

Intradermal ~~sts~~ test for immune status in Leprosy

⊕ ← → ⊖

⊕ Towards TT side
⊖ Towards LL side

↳ Normal People

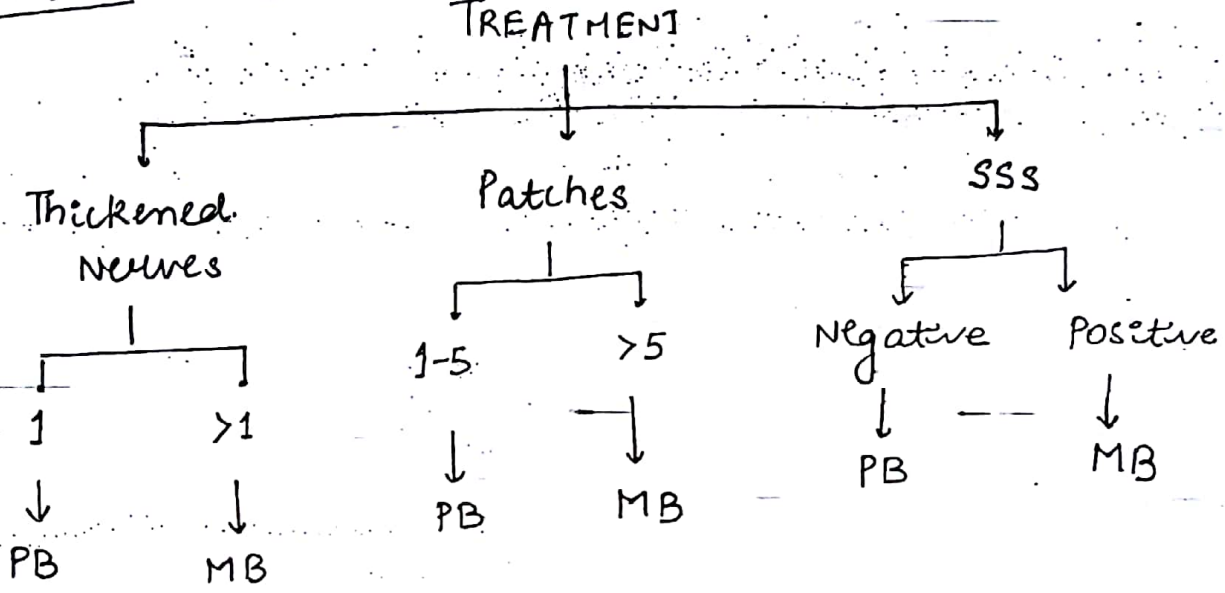
Not a diagnostic test but a prognostic test

Reading of Lepromin

1) Early response
↓
wheat at 48 hrs
↓
FERNANDEZ Rxn

2) Late response at 4 wks
↓
MITSUDA Rxn
(Better indicator of CMI)

SLIDE 1



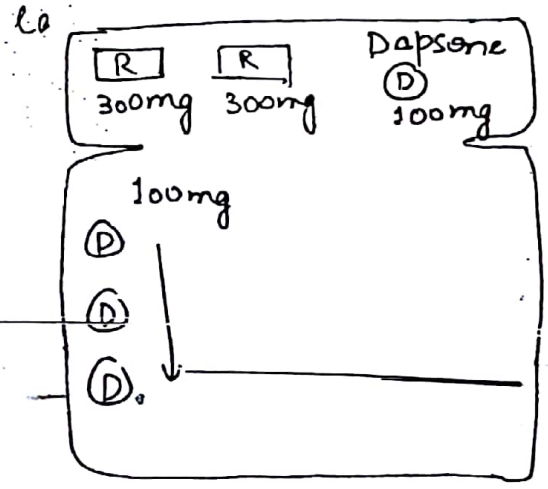
From a programme perspective only clinical Δ is enough to classify PB & MB

ROM = Rifampicin + ofloxacin + Minocycline is discontinued

SLIDE-2

PB PACKET – GREEN

each packet = 28 days
Finish 6 pack max in 9 months

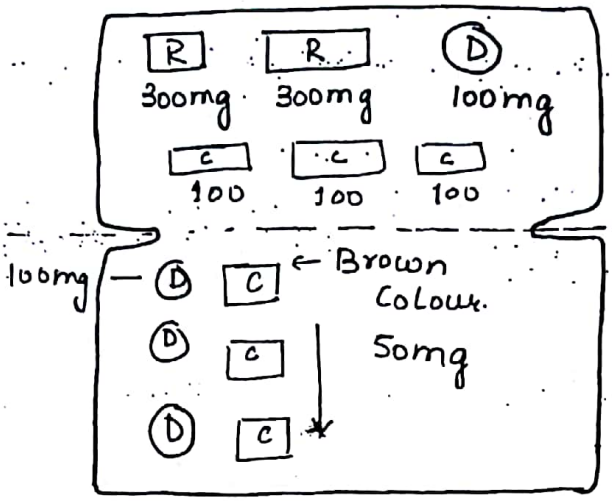


5 supervised monthly

Daily unsupervised

SLIDE - 3 MB - Red

12 packets max in 18 months.
Each pack = 28 Days



- Lesions often remain the same even after completion of MDT.

2nd LINE DRUGS

1) Quinolones
   Moxi/ Spar/ ofloxacin
2) Clarithromycin
3) Minocycline
4) Rifapentene

S/E of CLOFAZIMINE

Q Pigmentation - M/c
Ichthyosis (Dry Skin)
~~Intestinal obstruction~~

S/E of DAPSONE

1) Hemolytic anaemia
2) Peripheral neuropathy
3) **Dapsone Syndrome** (5th WEEK SYNDROME)
   - Skin Rash
   - Hepatitis
   } after 5 weeks of taking Dapsone

STD

GENITAL ULCER DISEASES

① SYPHILIS

T. pallidum - Spirochete ∴ "cork-screw" motility

∿∿∿

↓

enters Genitals

(1° chancre) I.P. - 9-90 days

↓

ulcer.

Extragenital chancre = H/C site = **LIP**

SLIDE-4

1° chancre
(Hard - Hard chancre)
painless
- Button like ⚲
- Round / oval
- Single
- Regular edges

I.P. = 9-90 days

IOC in 1° chancre - Smear from ulcer
↓ followed by
Dark Ground Illumination (DGI)
↓
MOST SENSITIVE & MOST SPECIFIC TEST IN 1° SYPHILIS

DGI can't be done from extragenital Lip chancre due to salivary contamination ∵ commensal Treponemes.

SLIDES

Blood Test In 1° chancre

at 3 wks → EIA (Enzyme Immuno assay)
| most sensitive screening test

at 3 wks → FTA-Abs → outdated.

4 wks → VDRL

4-6 wks → TPPA / TPHA

(b) → Ing. L.N. ⟶ move into Blood (2° syphilis)
enlarged
painless
Rubbery
Shotty
IOC = VDRL

1° chancre self heals

SLIDE-6

Rash
Non-Itchy
M/c sign
Great imitator
No blister
Papules/plaques, scales
Palm, sole involved

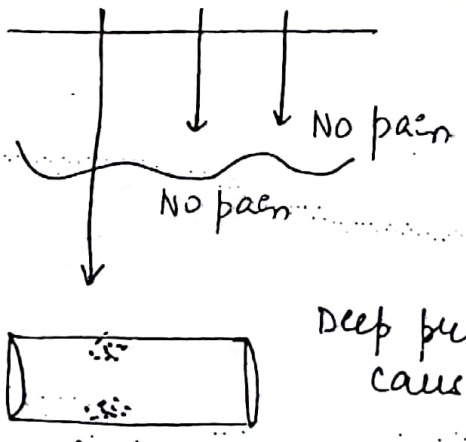
Condyloma Lata
(Flat, moist plaques - anal/groin)

2° syphilis

Mucosal involvement
(Snail track ulcers)

gen. Lymphadenopathy

Deep Dermal Tenderness/ Buchke-Ollendorf sign
On deep pressure ⊽ a blunt object on Palm, sole
Lesion → there is deep tenderness



Deep pressure on palm, sole causes tenderness

End arteritis Obliterans

Condyloma Lata is full of Spirochete
↳ Hence DGI sample can be ✓ taken from it

MOTH-EATEN ALOPECIA

non-scarring alopecia → also seen in
- → alopecia areata
- → trichotillomania

2° syphilis ⟶ spirochetes stay in blood but become inactive.

(Pts → asymptomatic)

LATENT SYPHILIS → EARLY LATENT
LATENT SYPHILIS → LATE LATENT

↓

Spirochetes go into deep tissue.

[TERTIARY SYPHILIS]

3 types

- Into skin → Gummatous Syphilis
- ↓ CNS → Cardiovascular
- CNS → Neurosyphilis

IOC of neurosyphilis = CSF VDRL

SLIDE 7

EARY SYPHILIS <2yrs	1° 2° Early Latent	Inj^{n} Benzathine Penicillen 2.4MU IM Single dose
LATE SYPHILIS >2yrs	Late Latent 3°	Inj^{n} Benzathine Penicillen 2.4MU IM 3 doses at weekly intervals Neurosyphilis → I.V. aqueous crystalline penicillin

JARISCH- HERXHEIMER Rxn

Inflammation, Fever, ↑ of Lesions after Rx in syphilis is max. in 2° syphilis.

Rx In Penicillin Allergy:-

Doxycycline (14 days - early syphilis
Incompliance ↓ 28 days - Late syphilis)

Chancre (Redux)

Recurrent syphilis
Relapsing

Rx Pregnancy:-

→ Same as in non-pregnant pts.
→ If allergic to penicillin → Desensitize

VDRL - used to monitor response to therapy
↓
titre reduces 4 fold ī in 6 months of Rx.

1:64
↓ Rx
1:16 ī in 6 months

Specific Treponemal Tests (TPPA, TPHA) remain +ve even after ~~therapy often~~ life long

So, can't be used for prognostic purpose

CONGENITAL SYPHILIS

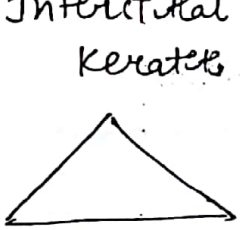
Early (1st 2yrs) — like adult 2° syphilis

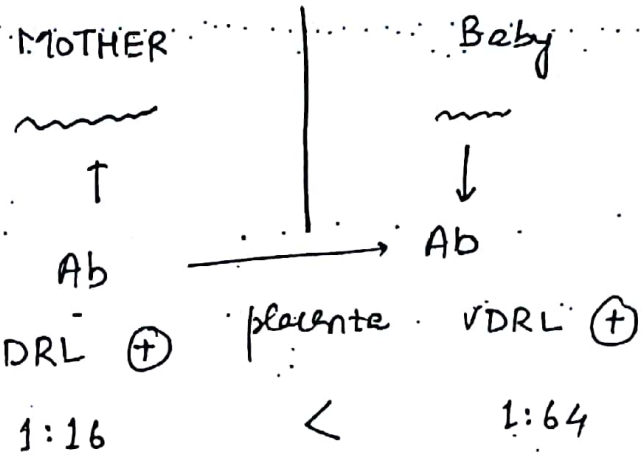
Late (>2yrs) — like adult 3° syphilis

SLIDE-8

EARLY CONG.	LATE CONG.
1) Snuffles (Rhinitis) earliest & M/C sign	1) Clutton's Joint - Painless knee swelling
2) BLISTERS @. (syphilitic pemphigus)	2) Sabre Tibia (Ant. bowing of tibia)
3) Epiphysitis	3) Olympian's Brow - frontal Bossing
4) osteochondritis cause pseudoparalysis	4) SADDLE NOSE
4) Condyloma Lata	

HUTCHNISON TRIAD of LATE CONG. SYPHILIS





⇒ VDRL is +ve in Baby at birth.

But if titre is more than mother
↳ Baby has syphilis

Δ = VDRL of Baby 4times > mother's titre

DG1 from nasal secretions . blister fluid

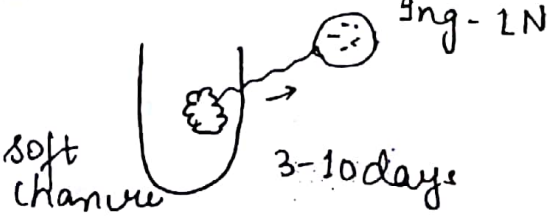
(II) CHANCROID

H. Ducreyi - extracellular gram -ve organism.
θθ
I.P. = 3 - 10 days.

Chancr|oid
↙ ↘
chancre like.

⇒ completely unlike chancre.

SLIDE-9



painful
Multiple
~~irregular~~ edges
Bleeds on touch

Inflammation
↓
Bubo (ipsilateral, may suppurate)

In chancroid, kissing ulcers are seen due to autoinoculation.

Δ =

1> Gram stain on smear ⇒ Gram -ve

School of fish
Rail road track
extracellular

2> Intradermal test - ito test
outdated

3> PCR on skin Biopsy or smear.

Rx -

Azithromycin 1gm stat
or
Inj^n ceftriaxone 250 mg im stat

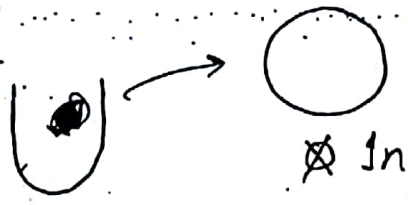
(III) DONOVANOSIS

INTRACELLULAR

Calymmatobacterium granulomatis (Klebsella granulomatis)
I.P. = 8-80 Days.

→ Hypertrophic granulation tissue on ulcer floor
→ Beefy Red colour
→ Bleeds on touch
→ Painless

SLIDE - 10



Granuloma - pseudobubo

⊗ Ing. L-N.

Granuloma Inguenale

Crush smear.

↓

Giemsa stain

DONOVAN BODIES

Histocytes (closed safety Pin) arrangement

† AIIMS Nov 15, May 2017

Ⓟ Organism is intracellular

Rx = Azithromycin 1gm/week (preferred) } Till ulcer heals

or

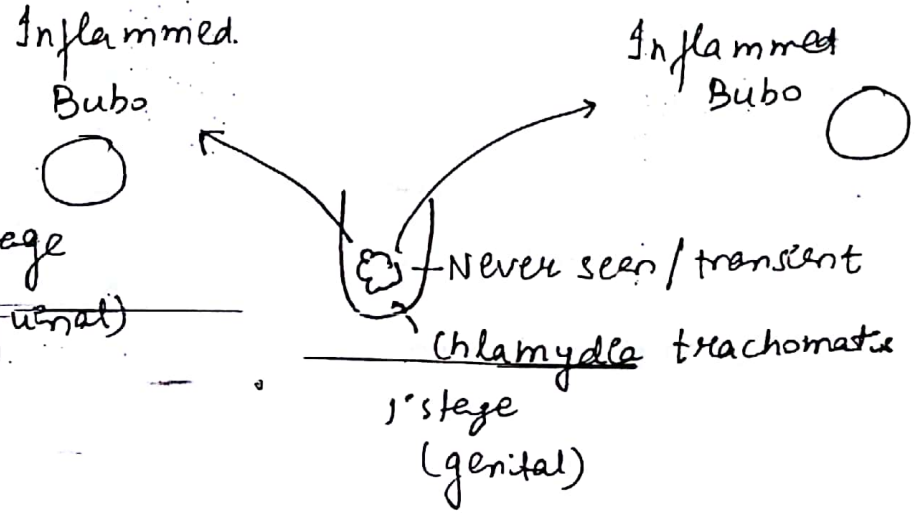
Doxy 100 mg BD

IV LGV

Chlamydia Trachomatis

I.P - 10 - 30 days.

SLIDE - 11



BuBos

U/L B/L

ing Bubo → Inguinal Legament (GROOVE)

Femoral Bubo

Also seen in

a) MONDOR's Disease

b) Eosinophilis fascitis

3° Stage of LGV

Elephantiasis due to Lymph oedema

RAMS HORN PENIS / SAXOPHONE

S shaped penile deformity

LYMPHANGIECTASIA

Bubbles of lymph on skin surface

LYMPHORRHOEA

oozing of lymph

ESTHIOMENE

(Lymphangiectasia + overlying ulceration)

Δ of LGV = 1> Frei test → outdated

2> PCR for chlamydia by NAAT ← Best Test

Most commonly done 3> CFT (complement fixation Test)

4> MIFT (micro immuno flouresent test)

1) fissure
2) fistula
3) Sinuses
4) Strictures.

℞ of LGV-
Doxy 100 mg BD for 21 days

V HERPES GENITALIS

HSV-2 > HSV-1.

Recurrent Blister + Ulcers (Painful, grouped) along ± painful inguinal Bubo always recurrent

℞ = Acyclovir group of Drugs.

URETHRAL DISCHARGE

Pathology = URETHRITIS

GONOCOCCUS

Gram -ve intracellular diplococcus

♂
often symptomatic
↓
Urethritis
(urethral discharge)

♀
↓
1) often asymptomatic (carrier)
↓
In cervix
2) cervical discharge

Presumptive Partner Treatment (PPT)
is done in STDs to prevent recurrence in index STD pt.

SLIDE-12

GONOCOCCAL	NON-GONOCOCCAL
N. gonorrhoea	Chlamydia/Trichomonas/ mycoplasma/ureaplasma
~~IP~~ 2-8 days	1-3 weeks
Thick purulent urethral D/C	Thin mucopurulent D/C
Rx	Rx
→ Inj ceftriaxone 250mg IM stat + Azithromycin 1gm stat (preferred)	Tab. azithromycin 1gm stat (preferred)
→ Tab cefixime 400mg stat + Azithromycin 1gm stat	Doxy 100mg BD for 7 days

SYNDROMIC APPROACHES

URETHRAL DISCHARGE

GONORRHOEA → CEFIXIME

CHLAMYDIA → AZITHRO

GREY PACKET

NACO KIT-1
AZITHRO + CEFIXIME

VAGINAL DISCHARGE

CANDIDA
White creamy
minimal D/c
Itching

TRICHOMONIASIS
Green frothy D/c
Profuse D/c
Strawberry Cx
Itching

BACTERIAL VAGINOSIS
Foul smelling D/c
H/c cause
No Itch
No Inflammation

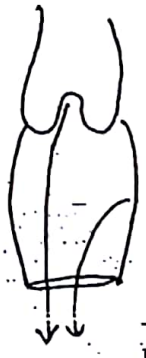
Candida → Tab. FLUCONAZOLE 150mg stat

Trichomonas, Gardenella → Tab Metronidazole 2g stat
or Tab Tinidazole 2g stat
or Tab Secnidazole 2g stat

NACO
KIT-2
SECNIDAZOLE
+
FLUCONAZOLE
green packet

CERVICAL D/C

GONORRHOEA → GREY KIT
CHLAMYDIA → GREY KIT



green kit
(for vaginal D/c)

Speculum Examn

BACTERIAL VAGINOSIS Q.

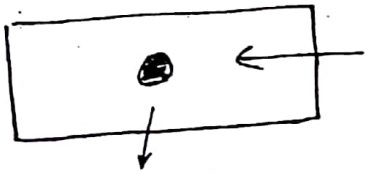
→ GARDENELLA VAGINALIS
→ Anaerobic Bacteria (Bacteroides, Peptococcus)
→ Mycoplasma

AMSEL CRITERIA Q.

1> Thin homogeneous white adherent D/c
2> Vaginal fluid pH > 4.5
3> Fishy amine odour (WHIFF TEST)
4> Clue cells ≥20%

Clue cells on wet mount / GRAM.

Organism epithelial cell



Amine / Fishy odour.
(whiff test)

INGUINAL BUBO

CHANCROID → AZITHRO 1g ① stat

LGV → DOXY (100) BD 21 days

BLACK PACKET

NACO KIT 7

DOXY 100mg BD for 21 days + AZITHRO 1gm stat

GENITAL ULCER

↓

VESICLES

(+) → HERPES → Acyclovir [RED KIT]

(−) → LGV, DONO, SYPH, CHAN

SYPH → BENZ. PENICILLIN + AZITHRO

CHAN → AZITHRO

WHITE ~~BLUE~~ KIT

↓

Allergic (DOXY) + AZITHRO 14 days

BLUE KIT

NO PARTNER T/T REQUIRED IN ♀

GARDENELLA

HERPES

CANDIDA [If partner is symptomatic et same time Rx partner]

M/C - WORLD (WHO - 2015)

STD (overall) - HSV2

Viral - HSV 2 > HSV 1

Bacterial - chlamydia > Gonorrhoea

Protozoal - Trichomonas

BLANK

PSORIASIS

→ Autoimmune Disease

→ TH1 & TH17 mediated inflammation (T cells)

→ IL-(12), IL-(17), IL-(23) → are secreted by T cells. initiating inflammation

→ Associated ⊂ HLA-CW6

R_x = Immunosuppresives [systemic steroid is C/I]

STABLE

↓ ← Exacerbating factors

UNSTABLE

(- sudden many new Lesions
- pustular psoriasis
- erythrodermic psoriasis)

* Exacerbating Factors :-

✓ Sudden withdrawal of systemic steroids

✓ ⑥ ♀

✓ Infn - streptococcus

✓ Drugs - (β blockers, Lithium, Chloroquine, NSAIDS, ACEI

TYPES

I> Ps. VULGARIS
↓
M/C type

on extensors silvery scales
itchy
chronic plaque form - M/C.

II> GUTTATE Ps.
↓
Raindrop

∴ associated ī streptococcal Pharyngitis
R_x - includes Antibiotic against strepto

III> ERYTHRODERMIC Ps. / EXFOLIATIVE DERMATITIS
↓ ↓
Red scaly

C/F- Red scaly plaques all over body (>90% of BSA)

R_x - 1st Line = Methotrexate
2nd " = ACITRETIN

IV> FLEXURAL PSORIASIS -
(inverse)
No scaling
~~sbr~~ erythematous shiny plaque in skin folds
(Inframammary area, groin) as scales get dislodged

V) SEBOPSORIASIS :
Silvery plaques on scalp
Thick scales

Seborrhoeic Dermatitis (SD)

↳ caused by MALASSEZIA.

↓

- yellow greasy scales
- thin scales

VI) GEN. PUSTULAR PSORIASIS (GPP)

C/F Diffuse pus all over body

severe inflammation

Fever

"Sheet of pus"

"Lake of pus"

→ separate pustules on periphery

all pustules fuse together in centre to form "sheet of pus".

GPP

Non-Preg ↓ VON-ZUMBUSCH TYPE ↓

Rx - 1st Line = Acitretin

2nd Line = Mtx

♀ ↓ IMPETIGO HERPETIFORMIS ↓

Doc = Syst. steroids

If ♀ is also diabetic ↓

Doc = Cyclosporin

VII) PSORIATIC ARTHRITIS

→ 5-30% of pts.

→ HLA B27, HLA B7

→ Nail psoriasis pt have ↑ risk of developing arthritis

→ Dactylitis, enthesitis

→ usually skin involvement preceder joint involvement

classical jt involvement = DIP.

DOC - Methotrexate (except ARTHRITIS MUTILANS)
↓ DOC
[Etanercept]

SLIDE-14

Rx

<10%	10-30%	>30%
1st Line Topical steroids Topical calcipotriol (vit D derivative) ↳ DOC 2nd Line - coaltar - Salicylic acid coalter is anti-division drug Salicylic acid is Keratolytic	1st Line · Narrow band · UVB 2nd Line · PUVA	1st Line · Methotrexate · Acitretin 2nd Line · Cyclosporin · Fumaric acid ester · Biologics. (Etarnercept Infliximab, Adalimumab)

OLD REGIMENS

INGRAM

UV

↓

ANTHRALIN

GOECKERMAN

UV

↓

COALTAR

WORONOFF'S RING -

- Hypopigmented Ring around psoriasis Lesions indicating healing of Lesions
- Due to inhibition of PG synthesis
  ↓ resulting
  — **Vasoconstriction**

REITER'S DISEASE

REACTIVE

M/c cause

entry of **Chlamydia** through sexual route

entry of Salmonella Shigella Yersenia Campylobacter → DIARRHOEA

↓

URETHRITIS

↓

3 common symptoms afterwards

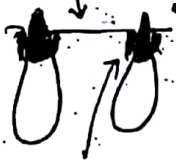
- **ARTHRITIS**
  - in wt bearing jts (large)
  - HLA-B27
  - enthesitis, dactylitis
- **RED EYE**
  Conj^{n} / Uveitis
- **SKIN LESIONS**
  - Circinate Balanitis
  - Keratoderma blenorrhagica (AIIMS, 08)

Keratoderma blenorrhagica
↓ skin ↓ pus → oozing.
hyperkeratosis
↓
on sole

PITYRIASIS RUBRA PILARIS

↓ Red ↓ Hair

(N) skin between follicle →



← Follicular keratosis
↳ very sharp on palpation
↓
Feels like a "Nutmeg - grater" on palpation

red/orange colour around hair

(N) skin bet follicle = Island of sparing

→ Palmo- Plantar Hyperkeratosis
→ Erythroderma
→ Keratotic ~~spo~~ sandal → thick plantar keraten appearing like sandal of keraten.

LICHEN PLANUS

autoimmune disease

5Ps → PAPULES
PURPLE
POLYGONAL
PRURITIC
PLANE-TOPPED

NO scale
Flexural areas (H/c- wrist flexure)

H/c HCV, ~~HBV~~

Usually healing ⊂ hyperpigmentation.

← mineral oil

White criss-cross marks
(Wickham's striae)

↓

is due to **HYPERGRANULOSIS**

TYPES OF LP

1) **ORAL LP**

- White criss cross (Lacy/ Reticular) pattern
- Buccal mucosa, tongue
- Associated ⊂ **Dental Amalgam** → contains Mercury
  - B/L ↳ U/L or B/L
  - have symptoms

AIIMS nov 15 (Image)

[Leukoplakia is U/L, not criss-cross, asymptomatic] –

* Risk of malignant pot" in oral LP :-

Lacy pattern doesn't have Risk

Ulcerative oral LP and LP on tongue have risk of 1-5%

2) ACUTE WIDESPREAD LP

Sudden eruption of multiple Lesions

DOC- systemic steroids

3> LICHEN PLANUS PIGMENTOSUS

Pigmentation in sun exposed areas (No itching)

4> LP PILARIS / PSEUDOPELADE

hair ← T cells

Bulge (stem cells)

↑ Bulge is Ag

↓

Scarring alopecia

- ✓ patchy scarring alopecia
- ✓ perifollicular blue-grey macules
- ✓ "foot print in snow appearance"

Perifollicular Blue-grey macule

5> ACTINIC LP

- → Sun induced LP
- → Itch
- → Hyperpigmented macule surrounded by a hypopigmented ring on sun exposed areas

6> HYPERTROPHIC LP

Hypertrophic plaques on lower legs

(thick, flat elevated)

Rx of LP

Oral LP
LP Pigmentosus → CHRONIC Dz.
LP Pilaris

⇒ **Localised LP** → Topical Rx
↓
Steroids
Calcipotriol
Tacrolimus

⇒ **Generalised LP** → Systemic Rx
→ Steroids
→ Non-steroidal immunosuppressive
Cyclosporine ← → Mtx
Phototherapy
Mycophenolate
Azathioprine mofetil

⇒ **For hypertrophic LP** → Acitretin (keratolytic)

ALOPECIA AREATA

autoimmune ds of hair

Ag :- melanin in hair bulb.

Bulge → (N)

T cells

↓

destroy bulb

↓

pathy alopecia → NO WRINKLING

H/c - scalp. ⇒ NON-SCARRING ALOPECIA

always sparing of white/ grey hair in alopecia path.

Rx :- LOCALISED PATCH

↳ Topical steroids

Minoxidil

Intralesional steroids - most effective

POOR PROGNOSTIC FACTORS

1) OPHIASIS

↳ areata at the hair line margin.

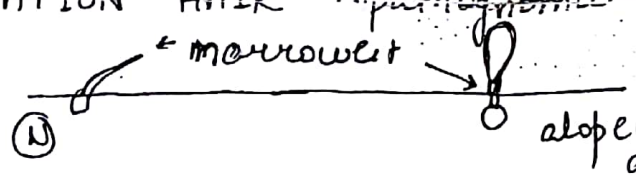
2) ALOPECIA TOTALIS

↳ loss of complete hair of scalp

3) ALOPECIA UNIVERSALIS.

↳ loss of total body hair

4) EXCLAMATION HAIR ~~pathognomic~~



! exclamation mark

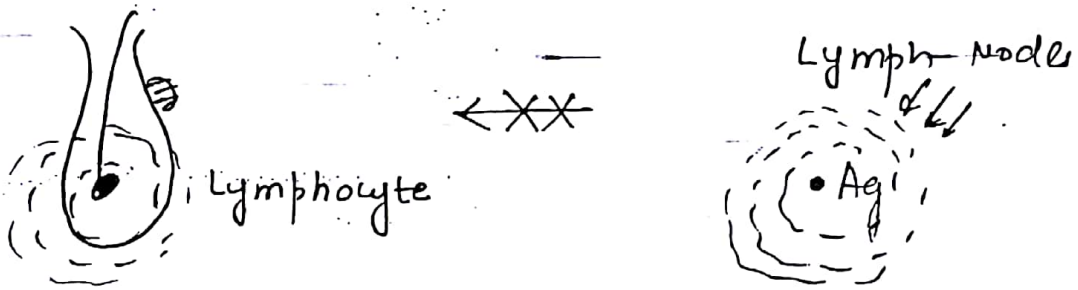
5) PRESENCE OF ATOPY

6) NAIL CHANGES (Regular pitting)

TOTALIS/ UNIVERSALIS

Contact Sensitizer

- Di Nitro chloro Benzene (DNCB)
- Di-Phen Cyprone (DPC)
- Squaric Acid Di-Butyl-Ester (SADBE)



TRICHOTILLOMANIA

AIIMS MAY 2017

→ Obsessive compulsive Disorder of hair pulling

→ Patchy Hair Loss i hairs of varying length in patch more on vertex & Dominant Hand side

→ TONSURE/ FRAIR TUCK SIGN:-
Loss of VERTEX & sparing of side

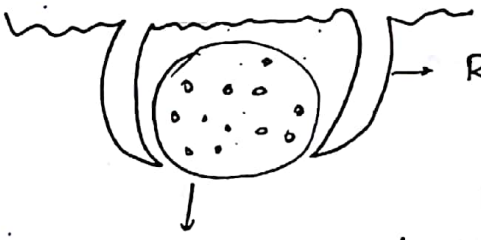
– HISTOPATH :- follicular H'ge

LICHEN NITIDUS AIIMS May 15

- Pin point papule on dorsum of hand + genitals
- asymptomatic
- self resolving

HISTOPATH

CLAW + BALL appearance
Clutching the ball +



→ Rete go down + curve inwards like a claw.

↓ Lymphocytes look like Ball

FUNGAL DISEASES

1) PITYRIASIS VERSICOLOR

- powdery scale
- various color

caused by Malassezia furfur
Now Malassezia globosa

Both are commensal around hair follicle in the seborrhoeic areas.

↓

Chest
Back
Face

↓ overgrowth of malassezia

↓

release Azelic Acid [Tyrosinase Inhibitor]

↓

Perifollicular Hypopigmentation

↓

Later fuse to form Large Patches [asymptomatic]

Sometimes other colours [Brown, Red, Yellow] may also be seen

SCRATCH SIGN-

scratching of Lesions make powdery scale prominent in the scratch Line.

Δ -

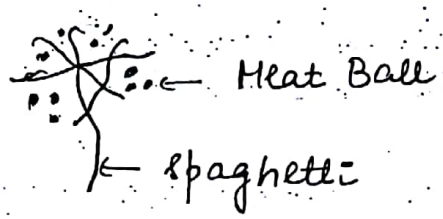
Scrapping

stain ⊂ KOH

↓

Spaghetti + MEAT BALL or

BANANA + GRAPES appearance Q.



Rx - 1) Oral + topical Azole group of drugs

2) Topical selenium sulphide

3) Oral griseofulvin / Oral Terbinafine dont work

* Organism is killed immediately but pigmentation problem takes longer (4-8 wks) to resolve.

2> SEBORRHEIC DERMATITIS (SD)

→ Malassezia overgrowth ⊂ Itching + yellow greasy scales in seborrheic areas.

→ SD in infants = CRADLE CAP

→ Extensive SD — HIV

Parkinson's Disease

Rx = Similar to pityriasis versicolor

3) CANDIDIASIS

Candida albicans (OPPORTUNISTIC Fungus)

↓

- DM
- Moisture
- Immunosuppression

TYPES

a> ORAL / THRUSH

↓

White creamy / white curdy plaques in oral cavity can be scrapped off (pseudomembrane)

↓

Leukoplakia can't be scrapped off.

b> CANDIDAL BALANITIS

↓

glans inflammation

erythematous itchy papule or erosion on glans often ī repeated washing ī water.

c> CANDIDAL BALANO-POSTHITIS

↳ prepuce

Fissures on prepuce

If recurrent → s/o uncontrolled DM Q.

D> CANDIDAL INTERTRIGO

↳ fold

↓ Bet"

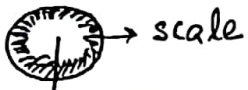
Moist erythema in folds ī satellite lesions

Δ -

- Smear
- Staining ⁻ KOH + grams stain to show budding yeast

4> **TINEA**

causes annular Lesions
↓
⁻ itching + peripheral scale



central clearing

A/c moist skin

Groin → Tinea cruris (Jack itch, Dhobi itch)

Body → T. corporis

Scalp → T. capitis

Feet → T. pedis / Athlete's Foot

Nail → T. unguium (onychomycosis)

Hand → T. mannuum

Steroid modified Tinea → T. incognito

ONYCHOMYCOSIS (T. of nail)

→ Yellow Discolouration

→ Thickening of nail

→ Subungual hyperkeratosis

T. PEDIS

3 TYPES

INTER-DIGITAL — Trichophyton Rubrum

CHRONIC PLANTAR SCALING (MOCCASIN FOOT) — Trichophyton Rubrum

BULLOUS T. PEDIS — Trichophyton Mentagrophytes Q

Tinea caused by **Dermatophytes**

3 Species

	TRICHOPHYTON	MICROSPORUM	EPIDERMOPHYTON
		Keratophilic	
Hair	✓	✓	⊗
Skin	✓	✓	✓
Nail	✓	⊗	✓

SLIDE 15

T. CAPITIS	ALL OTHER TINEAS
M/c organism	M/c organism
India - T. violaceum	T. Rubrum
World - Microsporum canis	
US/UK - T. Tonosurans	
DOC - Griseofulvin	DOC - Terbenafen

T. CAPITIS

Easy pluckability of hair in a **child**

Creates patchy hair Loss

ECTO-THRIX

↓

Caused by Microsporum

ENDO-THRIX

↓

Caused by Trichophyton

(16) T. CAPITIS

NON - INFLAMMATORY (Non-scarring alopecia)	INFLAMMATORY (scarring alopecia)
• GREY PATCH.	KERION
Microsporum canis	(Boggy swelling)
M. audouinii	Poor prog
M. ferrugineum	T. Mentagrophyte
• BLACK DOT	M. canis
T. Tonsurans /	T. verrucca
T. violaceum	
— —	—FAVUS
	(yellow scutulum)
	T. schoenleinii

5) SPOROTRICHOSIS

Ioc - Skin Biopsy

↓

H/P →

↓

ASTEROID- Bodies in dermis

*

→ Cigar shaped yeasts

≡

Rx = Oral ITRACONAZOLE → DOC

Other — KI

↳ Amphotericin B.

6> EUMYCETOMA

Swollen foot ~ Discharging sinuses
In a farmer walking BARE FOOT.

TRIAD Q.

TUMEFACTION (swelling

SLIDE-12

Swollen Foot ~ Discharging Sinus

- Botryomycosis [Staph]
- Eumycetoma
  Madurella mycetomatis
  → BLACK GRAINS
- Actinomycotes mycetoma
  a> Actinomadura madurae M/C
  b) Nocardia
  c) Streptomyces
  → WHITE GRAINS

EUMYCETOMA

Oral Itraconazole

KI.

Amputation.

ACTINOMYCOTIC MYCETOMA

Q. WELSH Regimen → Amikacin +
Rifampicin +
Cotrimoxazole.

7> CHROMOBLASTOMYCOSIS

Presents as cauliflower masses on feet in a barefoot farmer after a thorn prick

Smear shows → naturally yellow spore
SCLEROTIC BODIES
MURIFORM "
MEDLAR "
COPPER - PENNY

DOC- Oral ITRACONAZOLE + Sx excision of Mass.

VIRAL DISEASES

I) HPV

Causes warts

- Warts comes on Non-genital skin → VERUCA
  - V. VULGARIS → HPV 2
  - PLANA → HPV 3, 10
- Genital skin (STD) → CONDYLOMA ACUMINATA
  - means pointed → HPV 6, 11

GENITAL WARTS

Imiquimod - Immunomodulator - DOC

Podophyllin, Podophyllotoxin } Anti-mitotics

(purified extract of podophyllin)

IMIQUIMOD is a TLR-7, TLR-8 agonist

↓

hence, activates Langerhans cells

VERRUCA

- Burning (Cautery)
- Freeze - cryotherapy (Liquid N_2)
- Acids [Salicylic acid - DOC, Trichloro acetic acid]

GENITAL WART In ♀

- Trichloro acetic acid
- Cryotherapy (BETTER ANS)

PLANTAR WARTS Q

- SUPERFICIAL MOSAIC — HPV-2
- DEEP MYRMECIA — HPV-1

Q. BUSCHKE – LOWENSTEIN TUMOUR

Big cauliflower mass

mutated HPV-6, 11 → Creating Low grade Cauliflower shaped. SCC/ Verrucous carcinoma

SEBORRHEIC WART/ KERATOSIS.

BASAL CELL PAPILLOMA Q

Misnomer.

Sign of ~~Ageing~~

Due to benign proliferation of keratinocyte.

LESSER TRELAT SIGN

Sudden eruption of multiple seborrheic keratosis suggest underlying malignancy
(Adenocarcinoma of stomach > colon)

2) HUMAN HERPES VIRUS [HHV]

HHV 1 = HSV 1
cause **Herpes Labialis**
group blisters on the lip + peri-oral area.
reactivating ~ fever [FEVER BLISTER]

HHV 2 = HSV2
causes **Herpes Genitalis**

ECZEMA HERPETICUM / KAPOSI'S VARICELLIFORM ERUP°
Disseminated HSV-1 in an atopic eczema patient who is immunosuppresed + is inoculated by HSV-1 through another patient
Also seen ~ DARRIER's DISEASE
P. FOLEACEOUS PI.

HHV 3 = Varicella Zoster virus
1st episode = Varicella [chicken pox]
Reactivation = Herpes Zoster [shingles]

Varicella presents as Vesicles (Dew Drop on Rose Peta) ~~pustule, finally crust (non-contagious)~~
It has polymorphic, centripetal lesions

After varicella gets → VZV remains hidden in spinal & cranial ganglia. & reactivate along dermatome. (immunosuppression)

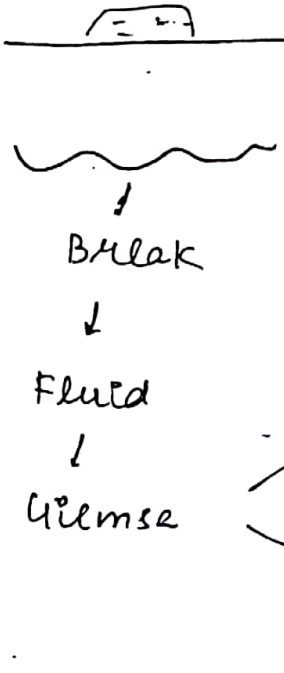
↓

HERPES ZOSTER

COMPLICATION OF HERPES ZOSTER

1) Post- herpetic neuralgia (PHN)
   defined as pain even after 4 weeks of resolution of herpes zoster
   DOC = GABAPENTIN

TZANCK SMEAR



PITYRIASIS ROSEA

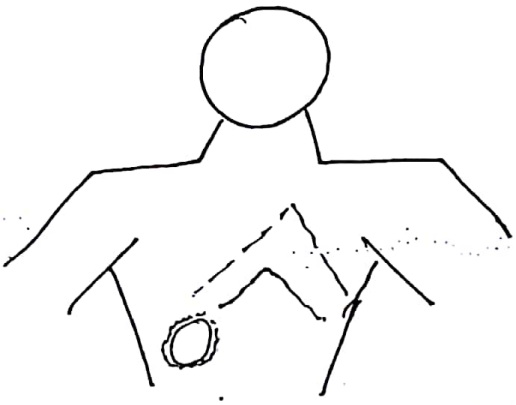
HHV 7 > HHV6

Rarely, Drug Induced.Q

1st Lesion of Disease ⇒ HERALD PATCH / MOTHER PATCH

↓

annular
Itchy
Peripheral scale (collarette)
TRUNK



Rest of lesion come in straight line meeting in centre

↓

FIR TREE / CHRISTMAS TREE pattern. (differentiate with Tenea)

→ Self limiting in 4-10 wks
→ Acyclovir shorten disease duration.

3) MOLLUSCUM CONTAGIOSUM

caused by MCV (DNA virus)

← Inclusion Body

↓

molluscum Body
[Henderson Peterson Body]

C/F- → Shiny umbilicated dome shaped papule
→ children, face
→ genital molluscum → STD

Rx - same as for warts

PARASITIC DISEASES

I> SCABIES

Caused by female scabies mite
enters finger web or genital through BURROWS
↓
S-shaped

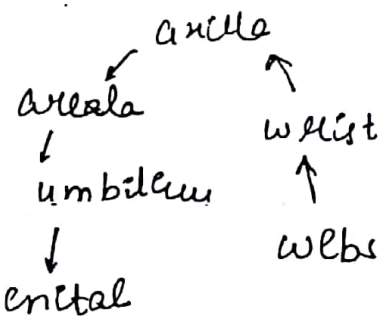
Avg. no. of mite on skin = 12

C/F- Itchy Papules in adults
Nocturnal Itch
Facial sparing in adults

Scabies → poor hygiene disease
[WATER WASHED DISEASE]

I.P. = 3-4 weeks → 1st episode
1-2 days - later episode
(due to memory T cells)

CIRCLE OF HEBRA



Rx - For pt + close contact + clothing

Rx for INFANT SCABIES

→ Face is involved
→ Palm / sole involved
→ Papules + Vesicles

Rx - DOC → 5% Permethrin - single overnight application
[adults, infants, ♀]

other Rx -

Topical
1) Benzyl Benzoate 25%
2) Lindane
3) γ Benzene Hexachloride
4) Crotamiton
5) Sulphur

Oral → Ivermectin → 2 doses
14 days apart
(200 µg / kg / dose)

NODULAR SCABIES

Hypersensitivity response to scabies mite

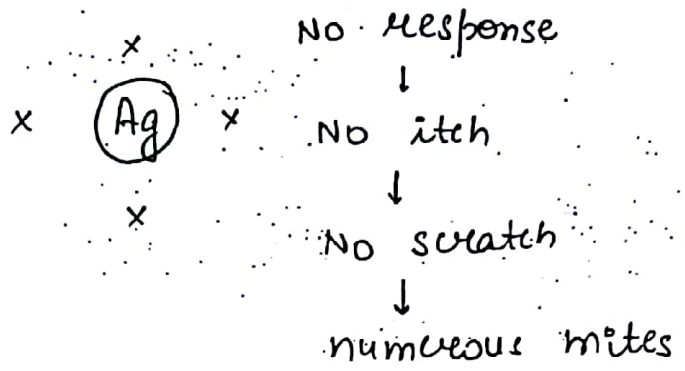
INTRALESIONAL STEROIDS

5% PERMETHRIN → Ag → more inflammation.
↓
more elevation (nodule)

Seen on genitals

NORWEGIAN / CRUSTED / KERATOTIC SCABIES

HIV ⊕ pts



C/F - **Hyperkeratosis**

R_x - Oral Ivermectin + Topical Permethrin.

PEDICULOSIS

caused by LOUSE

HEAD LOUSE

Long, slender, louse lays eggs (Nits) on scalp hairs

Nit → adult → Itch

P. CAPITIS

R_x - 1% permethrin

BODY LOUSE

causes pediculosis corporis.

VAGABOND'S DISEASE

Not on Body, But on clothing → Bite Skin → returns back to cloth

R_x = ~~Disinfect~~ of cloth

PUBIC LOUSE / CRAB LOUSE

Short, stocky louse

causes **P. PUBIS**

Louse bite mark → called Maculae cerulae

R_x = 1% permethrin

5% Permethrin

Oral ivermectin

III) ERYTHEMA CHROMICOM MIGRANS

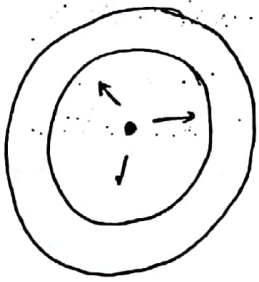
Bite by a hard tick (IXODES)

↓

deposits

BORRELIA BURGDORFERI into skin

↓



red rings around Bite ⟹ TARGET LESION

↘ ANNULAR LESION

↓

Later Pt develops

LYME'S DISEASE

IV) PKDL

Post-Kalazar Dermal Leishmaniasis

Bite by a sandfly

↓

deposits Leishmania

↙ cutaneous Leishmaniasis

↓

CRUSTED ULCER

↘ Visceral Leishmaniasis

↓

Fever ± hyperpigmentation

[KALA-AZAR]

↓

after many yrs of Kalazar

↓

PKDL

PKDL

Hypopig — Nodular

(B) forms resemble Leprosy

H/o Past fever in Q ⇒ Suggests PKDL

Δ of PKDL-

Crush smear (giemsa stain) for LD Bodies

Slit Skin smear (") for LD Bodies

DOC -

Oral MILTEFOSIN

V) INSECT BITE HYPERSENSITIVITY

Excessive Immune Response to Simple Insect Bite

→ Lesions on exposed areas.

→ ↑ in Rainy Season

ECZEMA / DERMATITIS

1) ATOPIC ECZEMA

TH2 mediated inflammation (B cell)

Δ :- Hanifin & Rajka criteria

SLIDE - 18 MAJOR CRITERIA - Any 3 out of 4.

1) Itching → Hallmark

2) Typical Sites
   - → Extensor Dermatitis [children] 0-2yr
   - → Flexor Dermatitis [Adults & children] 2-12yr

3) Personal H/o / Family H/o of atopy

4) Chronic relapsing course

classical flexor involved = ante-cubital fossa

" extensor " children = cheek

[HEADLIGHT SIGN]

↓

sparing of nose & ~~peri-oral area~~, ~~periorbital~~ area

ACUTE STAGE → Oozing, crusting

CHRONIC STAGE → Lichenification

MINOR CRITERIA

1) Dennie MORGAN FOLD -
   Extra crease on Lower eyelids

2) Pityriasis Alba -
   - Hypopigmented patch ± fine scaling on cheek in children
   - often recurrent / non-itchy

3) Peri-orbital Pigmentation

4) White Dermographism - Q
   Vasoconstriction on scratching.

5) Plantar Hyperlinearity

6) Palmar Hyperlinearity

7) Ichthyosis Vulgaris (Dry skin)

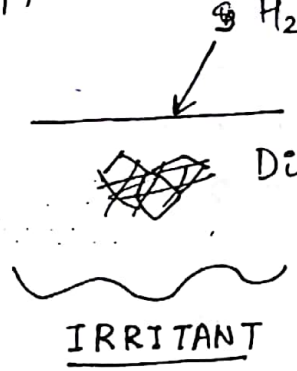
Rx -
1) → Moisturising cream (lipids)
   ← Lipid replacement

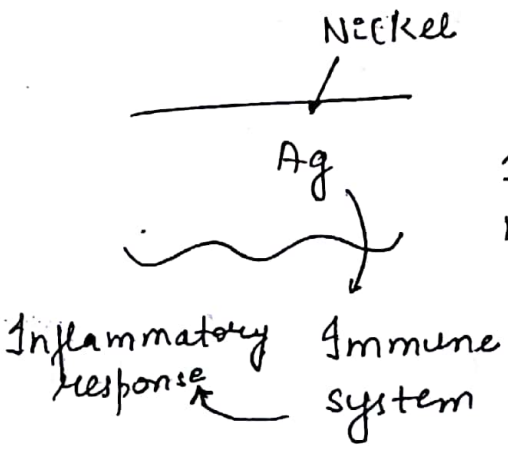
2) TH2 cell Inhibitors
   Localised D. → generalised Disease

Localised Disease	Generalised Disease
Steroid	steroid
Calcipotriol	Cyclosporine
Tacrolimus	Azathioprine
	Phototherapy
	Mycophenidate

II> CONTACT ECZEMA

SLIDE-19





1st exposure sensitizes next exposure cause clinical disease

IRRITANT

Not Immunological

Due to toxic chemical

No sensitization required direct clinical phase

Memory cells not Involved

Eg.

1) Detergents (HOUSE WIVES ECZEMA)
2) Acid & alkali Burn.

ALLERGIC

Immunological Type-4 hypersensitivity

Sensetization phase 1st followed by clinical phase

Memory cells involved In predisposed person

Δ -
PATCH TEST

Eg. 1) nickel → M/c overall
2) PPB → in hair dye
3) vegetable - M/c in Indian female

READINGS OF PATCH TEST

1st Read ↓ — 2nd Read ↓ — For neomycin, PPD - metals

Day 0 — Day 2 — Day 4 — Day 7 ↑ 3rd Reading

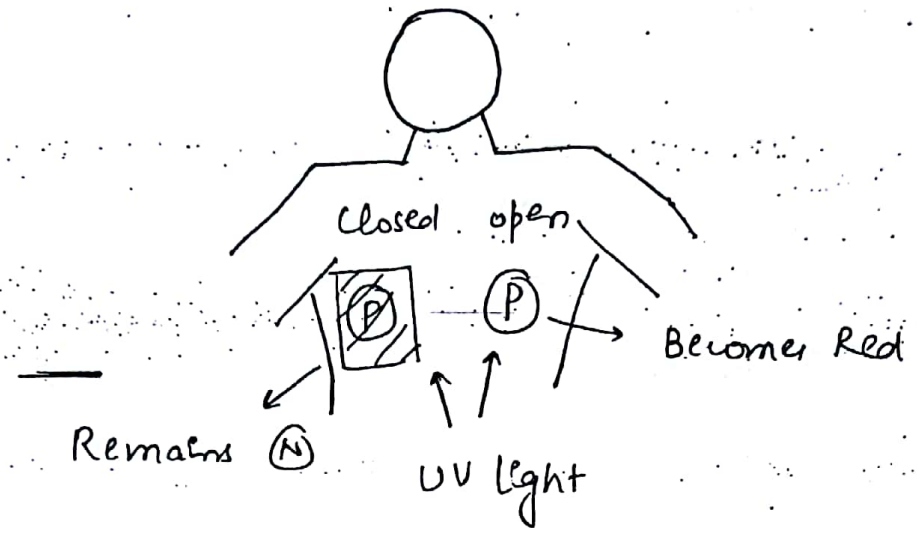
~~OCU~~ OCCUPATIONAL CONTACT DERMATITIS

A) Air Borne Contact Dermatitis / Phytophoto dermatitis

seen in farmers.

exposed to Ag - from Parthenium Plant coupled ± some exposure

A- Photo PATCH TEST AIIMS - May 16.



DOC - AZATHIOPRINE

B) CEMENT DERMATITIS

Ag → Potassium Dichromate

C) HAIR DRESSERS

Ag - PPD

D) TEXTILES

Ag - AZO DYES

III) POMPHOLYX

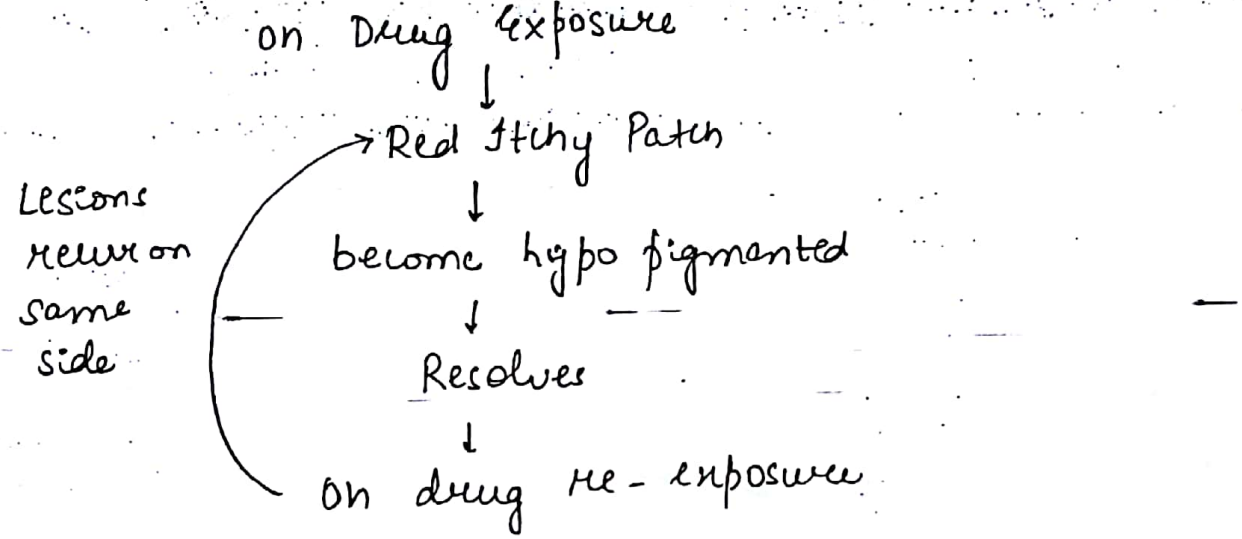
→ Form of HAND & FOOT ECZEMA ~ severe spongiosis

→ presenting as Deep seated Blisters on Palm & Soles ~ SAGO ~~GRAIN~~ like feel, severe Itching

DRUG REACTION

A> FIXED DRUG ERUPTION

- M/c cause - NSAIDS
  other tetracycline
  Metronidazole
  Sulphonamides



COMMON SITE = Lips, Genitals

Pigmentation is Bluish-Grey

[BROWN PIG. ON NOSE Post Fever = CHIK Sign seen in chickenguniya]

Bullous FDE is seen in Genitals.

On Genitals it comes ~~as~~ as recurrent blister / ulcer healing ↓ hyperpigmentation (not ↓ Herpes genitalis)

B> **ERYTHEMA MULTIFORME**

C/F- Target Lesions ∈ 3 ZONES 

ETIO-

H/cc - HSV

other - Mycoplasma
Idiopathic
Drugs

Rx- self Limiting

BULLOUS EM ⇒ centre most area gets blister

2 types of EM

EM MINOR	EM MAJOR
Few target Lesions	Many target Lesions
No mucosal involvement	one mucosa involvement (oral)

C> **STEVENS JOHNSON SYNDROME (SJS)**
TOXIC EPIDERMAL NECROLYSIS (TEN)

ETIO → mainly Drug Induced
→ sometime mycoplasma.

C/F- 1) TARGETOID LESION or atypical target zones

2) ≥ 2 mucosa involved

Depending on % Body

<10% → SJS

10-30% → Overlap

>30% → TEN

TEN (LYELL'S SYNDROME)

cut in Basal Layer

↓

Blister

↓

Death extends to full epidermis (necrosis)

↓

falls off

↓

Barrier Loss

Rx- 1) FAS (R) Antagonist ⇒ IVIg

2) CD8 cell Inhibitor ⇒ CYCLOSPORINE.

~~NICHOLS~~ * NIKOLSKY SIGN

Tangential movement of finger create epidermal movement & a raw area underneath.

BLISTERING DISORDERS

A) IMPETIGO

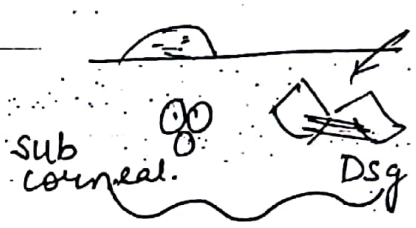
NON - BULLOUS

IMPETIGO CONTAGIOSA

- Staph > Gr A strepto
- Commonest skin infec" in children
- Honey coloured crusts around mouth ♀ nose

BULLOUS

PEMPHIGOUS NEONATORUM



E. Toxin. disseminates in Blood ↓

(exfoliative) SSSS
or
(epidermolytic)

DIF = (-ve)

HYPOPYON SIGN - pus in Lower 1/2

Dsg 1 → Seborrheic areas
↘ mucosa - absent

Child

RITTER's Disease

Presents only in children as scale crust lesions at seborrheic areas without mucosal involvement

Fever (+)

Nikolsky sign (+)

B) PEMPHIGUS

1) P. FOLEACEOUS

Seen in adults
No fever
Scale / crust in seb. area
NO mucosa

2) P. ERYTHEMATOSUS

also called SENEAR- USHER SYNDROME
variant of PF

PF x + SLE
x xx
↓
PE

3) P. VULGARIS

Dsg 3 Disorder
↓
present all over body
↳ also tnt in mucosa

→

Deep wounds
open painful wound, slow to heal

Severe mucosal involvement.

2 TYPES

MUCOSAL	MUCOCUTANEOUS
Only Dsg 3 involved	Both Dsg 1 + 3 involved

4) P. VEGETANS

↳ like a vegetable

↳ cauliflower-like masses in flexures

variant of PV.

Rarest pemphigus

5) PARANEOPLASTIC PEMPHIGUS

Resembles P. vulgaris but ∴ Internal Malignancy

↓

M/c → NHL

Others → CLL

↳ Castleman Disease

↳ Thymoma

↳ Retroperitoneal Sarcoma

Nikolsky sign ⊕ in all pemphigus.

Rx = 1) Systemic steroid - Doc

↓

High Dose

2) Non-steroidal immunosupp.

eg. Azathioprine, Mycophenolate, Cyclophosphamide

3) Rituximab → antibody
↓
monoclonal
against CD_{20} receptor on B cell surface

B c> **BULLOUS PEMPHIGOID**

Tense fluid filled blisters
Blisters come on red/ urticarial skin
extremities/ trunk
Elderly patients

H/P - subepidermal blisters + eosinophils

BULLA SPREAD SIGN/ LUTZ SIGN

Bullous Pemphigoid

P. vulgaris

ASBOE - HANSEN SIGN

Variant of Bulla sign
Pressing on **top** of blister not from one side

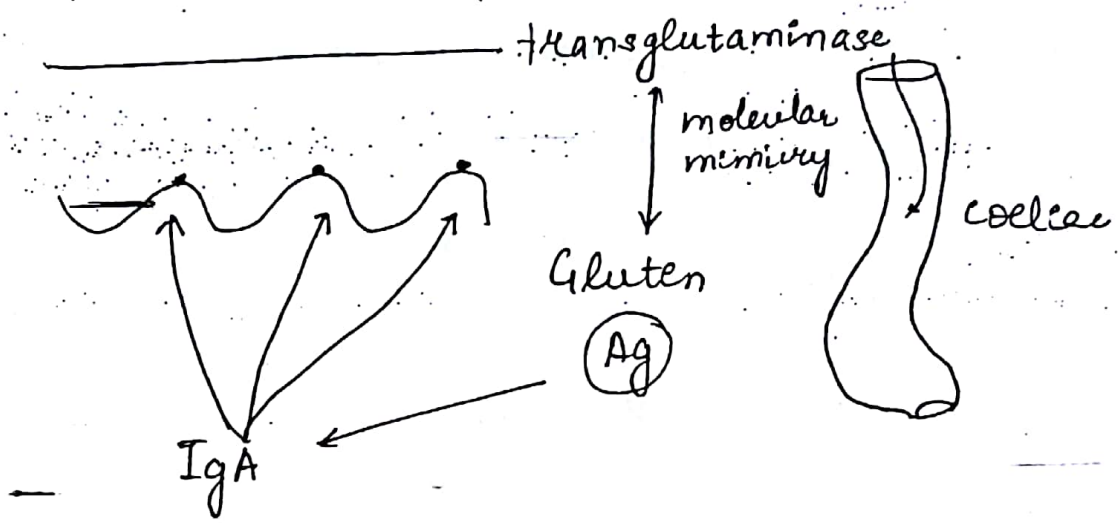
BP in ♀ ⇒ ~~GESTAT~~ PEMPHIGOID GESTATIONIS
(Herpes gestationis)
✕ → ↓ miscarriage
M/C site - Periumbilical Blisters

D) **DERMATITIS HERPETIFORMIS**

Papillary tip Blisters

↑ " " ↓ Microabscess Q.

SLIDE - 20



DIF → IgA @ tip of Dermal Papilla in a granular pattern

Severe Itching

Grouped papulovesicles on elbow.

DOC = Dapsone + Gluten free diet

E) **LIGA / Chronic Bullous Disorder of Childhood**

CBDC

ADULTS — children

→ Itchy tense blisters in a cluster of Jewel or string of pearls appearance

→ 50% have mucosal involvement

→ DOC - DAPSONE

F) HAILEY / HALLEY DISEASE

Benign Familial Pemphigus

Age of presentation - 2-4th Decade

Flaccid Blisters in Flexors rupturing easily to create erosions & painful fissure.

H/P – Dilapidated Brick Wall Appearance

Level of Blister: SUPRABASAL

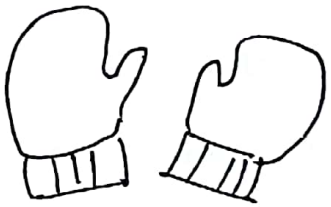
G) EPIDERMOLYSIS BULLOSA

(Trauma Induced Blister) —

Blisters @ site of handling

MITTEN HAND DEFORMITY seen in EBD.

Δ - electron microscopy



VASCULAR LESIONS

VASCULAR TUMOURS

CONG.

Infantile Hemangioma
(strawberry hemangioma
capillary "
cavernous ")

Grows Rapidly - till 9 months
then plateau phase then
resolves

Blanches on pressure

Propranolol is Doc. if
→ Rapidly ↑
→ Ulcerating
→ near eye

VASCULAR MALFORMATION

- Port wine Stain
Persists throughout life
(portwine stain on glabella -
called a salmon patch
resolves)

Doesn't blanch

Associated with Sturge weber
Syndrome

Pulse Dye Laser (PDL)

STURGE WEBER SYNDROME

I/L Portwine Stain +

I/L Eye Involvement +

Same side CNS involvement

ICTHYOSIS

→ Generalised Dry Skin
→ Fish like scales
Ichthyos → means fish

A) CONGENITAL ICTHYOSIS

(I) ICTHYOSIS VULGARIS

H/c type
Flexures spared
Palms/Soles Involved
Small scales
Association - atopy
H/P → Absent granular Layer

(II) X- LINKED RECESSIVE ICTHYOSIS

Flexures Involved
Palms/Sole spared
Steroid sulphatase deficiency
Large Brown scales

(III) LAMELLAR ICTHYOSIS

Entire skin involved
Plate like Large scales (Lamella - Plate)
Born ⊂ "COLLODION membrane" Q.

B) ACQUIRED ICTHYOSIS

CRF

AIDS

Hypothyroidism

Hansens

Drug Induced (Nicotenic acid, clofazemines